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Summary of Precipitation and Streamflow for Potrero and San Clemente Creeks in Water-Year 2016

Santa Lucia Preserve
Monterey County, California

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Executive Summary

California State University Monterey Bay (CSUMB) began hydrologic monitoring of Santa Lucia Preserve for the Santa Lucia Conservancy in March 2007. The monitoring began as portion of permit requirements for land development implemented by Balance Hydrologics. This annual report presents precipitation and streamflow summaries for Potrero and San Clemente Creeks in the 2016 water year (October 1, 2015 to September 30, 2016). Daily records of discharge, temperature, and specific conductance are reported. Daily precipitation values are reported from the former San Clemente Dam and Santa Lucia Preserve golf course.

Water Year 2016 produced 22.25 inches of rainfall at the San Clemente Dam, representing slightly above-average precipitation, with a 37% chance of being met or exceeded each year (2.7 year exceedance recurrence interval). Potrero watershed yielded 0.22 acre-ft/acre and San Clemente yielded 0.42 acre-ft/acre of watershed area. San Clemente Creek maintained baseflow throughout the year, whereas Potrero Creek stopped flowing at the gage location on June 19, 2016.

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1 Introduction

This report is the Water Year 2016 (WY-16) hydrologic data summary for Santa Lucia Preserve. Balance Hydrologics installed five continuously recording streamflow gages on Santa Lucia Preserve. These gages include two on Las Garzas Creek (Moore's Lake inflow and outflow, installed in 2001), two on Potrero Creek (one installed in 2002 and one installed in 2013), and one on San Clemente Creek (installed in 2012). Detailed information on gage installation, operation, and individual gage sites can be found in Balance Hydrologics (2002).

The CSUMB Watershed Institute began operation of the Potrero Creek and San Clemente Creek streamflow on June 21, 2007. Data summaries are presented for streamflow on Potrero and San Clemente Creeks and for precipitation on Santa Lucia Preserve and San Clemente Dam.

2 Precipitation Data

A Rain Bird weather station operated by Santa Lucia Preserve provided precipitation data for the Santa Lucia golf. Precipitation data recorded by California American Water Company from the former San Clemente Dam are included for comparison.

At the former San Clemente Dam the total WY-16 rainfall was 22.25 inches (Table 1 and Figure 1), which represents average precipitation conditions at the Dam. The 95-year precipitation average at the former San Clemente Dam is 21.14 inches. Using Log-Pearson Type-III analysis, rainfall at San Clemente Dam should be less than 22.25 inches once in every 2.7 years on average (Figure 2).

The WY-16 recorded rainfall at the Santa Lucia Preserve Golf Course was 34.38 inches (Table 2 and Figure 3), falling above the 15 year average of 25.99 inches. The short duration of the record at the golf course may not produce average values indicative of actual long term precipitation patterns. The Preserve golf course received approximately 12.13 more inches of rain than San Clemente Dam. The available data do not show a consistent relationship between total precipitation at the San Clemente Dam and total precipitation at the golf course. During the 15 years of rain gage operation at the golf course, the golf course gage has recorded between 0.96 fewer inches and 12.13 more inches than the Dam gage, with an average difference of 7.06 inches and a standard deviation of 4.11 inches.

3 Streamflow, Temperature, and Conductance Data

The streamflow gaging station on Potrero consists of a Campbell CR10X data logger and a level TROLL 500. The stream flow gaging station on San Clemente consists of a Campbell CR1000 data logger (powered by 10 or 20 watt solar panels) and two Druck pressure transducers to measure water depth. Both Campbell data loggers have a specific conductance and water temperature probe, as well as staff plates for manual readings (Balance Hydrologics 2002). The Campbell data loggers record measurements of pressure, temperature, and conductance at 15-minute intervals. The level TROLL 500 data logger records measurements of pressure and temperature at 5-minute intervals.

In WY-16, streamflow gage data were downloaded to a laptop computer during monthly visits, at which time manual discharge measurements were also taken using standard hydrologic practices. A FlowTracker (SonTek handheld ADV) current velocity meter was used to measure discharge. A portable three-inch Parshall flume was used to measure discharge during the latter part of the dry season when flows became too low to use the FlowTracker meter.

3.1 Potrero Creek

The current gage station on Potrero Creek was installed April 29, 2002 and is located upstream of the T-11 well. In WY-16, Potrero Creek had a mean daily flow of 1.17 cfs, a maximum daily flow of 41.3 cfs, a minimum daily flow of 0.00 cfs, and a 7-day low flow of 0.00 cfs (Table 3). Mean daily streamflow and manual discharge measurements are plotted in Figure 4. Temperature and conductance data are presented in Tables 4 through 7, and in Figure 5. Specific conductivity for Potrero Creek varied widely, but was generally lower between December and April 2016 when there were higher flows. Between mid-April and mid-June, the gauge malfunctioned and there are no data for that period (Figure 4 & 5).

3.2 San Clemente Creek

The current gage station on San Clemente Creek was installed January 17, 2012 and is located near the Santa Lucia Preserve property boundary. In WY-16, San Clemente Creek had a mean daily flow of 1.89 cfs, a maximum daily flow of 21.80 cfs, and a minimum daily flow of less than 0.03 cfs. The 7-day low flow was less than 0.04 cfs (Table 8). Mean daily streamflow and manual discharge measurements are plotted in Figure 6. Temperature and conductance data are presented in Tables 9 through 12, and in Figure 7. Specific conductivity remained fairly consistent around 200 – 400 $\mu\text{mhos/cm}$.

4 Limitations

Streamflow gage data are based on the stage–discharge relationship unique to each stream and gage location. This stage–discharge relationship (rating curve) for each gage has been developed over time by making manual discharge measurements at various ranges of flow and noting the water level (stage) at which a particular flow occurs. Both rating curves include historic high flow measurements. The rating curve for Potrero Creek and San Clement Creek were adjusted this year to reflect to changes in the channel.

The Potrero Creek and San Clemente Creek are rated up to a discharge of 29.2 cfs and 21.5 cfs respectively. Manual measurements were not obtained above this flow.

As more discharge measurements are made (particularly in the higher range of flows) the rating curves may change and it will be necessary to update the streamflow data to reflect these changes. For this reason, the streamflow data contained in this report should be considered provisional and caution should be exercised when using these data.

5 References

[Balance Hydrologics 2002]. Brown S, Porter S, Woyshner M, Hecht B. 2002. Hydrologic record for water year 2002: Las Garzas, Potrero, and San Clemente Creeks, Santa Lucia Preserve, Monterey County, California. 53 pp.

6 Tables

Table 1. Daily precipitation record and monthly totals for water year 2016.

San Clemente Dam, Monterey County, California

Record obtained from: Monterey Peninsula Water Management District

Values are in inches

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|--------------|------|-------|------|------|------|------|------|------|------|------|------|------|
| 1 | 0.30 | | | | 0.74 | | | | | | | |
| 2 | | 1.05 | | | 0.05 | | | | | | | |
| 3 | | 0.05 | | | 0.03 | | | | | | | |
| 4 | | | 0.07 | 0.06 | | | | | | | | |
| 5 | | | | 0.72 | | | | | | | | |
| 6 | | | | 1.19 | | | | 0.16 | | | | |
| 7 | | | | 0.69 | | 3.45 | | | | | | |
| 8 | | | | | | 0.19 | | | | | | |
| 9 | | 0.61 | | | | 0.02 | | 0.05 | | | | |
| 10 | | 0.41 | 0.06 | | | | | | | | | |
| 11 | | | 0.67 | 0.03 | | 0.39 | 0.19 | | | | | |
| 12 | | | | | | | 0.01 | | | | | |
| 13 | | | | 0.11 | | | 0.03 | | | | | |
| 14 | | | 0.54 | | | 1.34 | 0.04 | | | | | |
| 15 | | | | | | | 0.01 | | | | | |
| 16 | T | 0.73 | | | | | | | | | | |
| 17 | | | | | | | | | | | | |
| 18 | | | | 0.93 | 0.87 | | | | | | | |
| 19 | 0.49 | | | 1.23 | | | | | | | | |
| 20 | | | | | | | | | | | | |
| 21 | | | 0.29 | | | 0.03 | | | | | | |
| 22 | | | 1.26 | 0.10 | | 0.05 | | | | | | |
| 23 | | | 0.22 | | | | | | | | | |
| 24 | | | 0.30 | | | | | | | | | |
| 25 | | 0.25 | 0.35 | 1.08 | | | 0.20 | | | | | |
| 26 | | | 0.35 | | | | | | | | | |
| 27 | | | | | | | | | | | | |
| 28 | 0.10 | | 0.06 | | | | 0.07 | | | | | |
| 29 | | | | 0.01 | | | 0.02 | | | | | |
| 30 | | | | | | | | | | | | |
| 31 | | | | | | | | | | | | |
| Total | 0.89 | 3.10 | 4.17 | 6.15 | 1.69 | 5.47 | 0.57 | 0.21 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual Total | | 22.25 | | | | | | | | | | |

Table 2. Daily precipitation record and monthly totals for water year 2016.

Santa Lucia Preserve Golf Course, Monterey County, California

Record obtained from: Santa Lucia Preserve

Values are in inches

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|--------------|------|-------|------|------|------|------|------|------|------|------|------|------|
| 1 | 0.10 | | | | | | | | | 0.01 | | |
| 2 | | 1.79 | | | 0.05 | | | | | | | |
| 3 | | 0.04 | 0.34 | | | | | | | | | |
| 4 | | | 0.01 | 0.20 | | 0.49 | | | | | | |
| 5 | | | | 1.48 | | 1.60 | | | | | | |
| 6 | | | | 1.93 | | 1.70 | | | | | | |
| 7 | | | | 0.18 | | 1.59 | | | | | | |
| 8 | | 0.56 | | | | 0.01 | 0.01 | | | | | |
| 9 | | 0.77 | | 0.03 | | 0.02 | 0.02 | | | | | |
| 10 | | 0.08 | 0.64 | 0.04 | | | 0.17 | | | | | |
| 11 | | 0.01 | 0.80 | | | 1.40 | 0.02 | | | | | |
| 12 | | | 0.01 | | | 0.27 | 0.01 | | | | | |
| 13 | | | 1.22 | 0.29 | | 1.18 | | | | | | |
| 14 | | | | 0.01 | | 0.36 | 0.03 | | | | | |
| 15 | | 1.15 | | | | | | | | | | |
| 16 | | | | 0.22 | | | | | | | | |
| 17 | | | | 0.16 | 1.53 | | | | | | | |
| 18 | 0.26 | | | 1.10 | 0.07 | | | | | | | |
| 19 | 0.62 | | 0.32 | 1.64 | | | | | | | | |
| 20 | | | | 0.01 | | | | | | | | |
| 21 | | | 0.91 | | | 0.05 | | | | | | |
| 22 | | | 2.51 | 0.90 | | 0.16 | 0.52 | | | | | |
| 23 | | | 0.01 | 0.37 | | | | | | | | |
| 24 | | | 0.66 | 0.02 | | | | | | | | |
| 25 | | 0.57 | 0.10 | | | | | | | | | |
| 26 | | | | | | | | | | | | |
| 27 | 0.02 | | 0.01 | | | | 0.02 | | | | | |
| 28 | | | 0.06 | | | | | | | | | |
| 29 | | | | 0.02 | | | | | | | | |
| 30 | | | 0.01 | 0.24 | | | | | | | | |
| 31 | | | | 0.68 | | | | | | | | |
| Total | 1.00 | 4.97 | 7.61 | 9.52 | 1.65 | 8.83 | 0.80 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 |
| Annual Total | | 34.39 | | | | | | | | | | |

Table 3. Mean daily flow, Potrero Creek, Water Year 2016
Santa Lucia Preserve, Monterey County, California

Values are cfs (unless otherwise noted)

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|----------------------|------|-------|-------|-------|------|-------|------|-----|------|------|------|------|
| 1 | 0.00 | 0.00 | 0.39 | 0.16 | 3.84 | 0.27 | 0.23 | | | 0.00 | 0.00 | 0.00 |
| 2 | 0.00 | 0.00 | 0.40 | 0.17 | 3.01 | 0.26 | 0.22 | | | 0.00 | 0.00 | 0.00 |
| 3 | 0.00 | 0.00 | 1.12 | 0.17 | 2.55 | 0.25 | 0.21 | | | 0.00 | 0.00 | 0.00 |
| 4 | 0.00 | 0.00 | 1.29 | 0.18 | 2.20 | 0.27 | 0.20 | | | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 1.20 | 1.57 | 1.90 | 2.38 | 0.20 | | | 0.00 | 0.00 | 0.00 |
| 6 | 0.00 | 0.09 | 1.28 | 19.51 | 1.65 | 24.61 | 0.19 | | | 0.00 | 0.00 | 0.00 |
| 7 | 0.00 | 0.09 | 1.39 | 13.78 | 1.46 | 41.28 | 0.18 | | | 0.00 | 0.00 | 0.00 |
| 8 | 0.00 | 0.12 | 1.42 | 5.97 | 1.25 | 16.43 | 0.18 | | | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.24 | 1.48 | 3.45 | 1.04 | 8.58 | 0.17 | | | 0.00 | 0.00 | 0.00 |
| 10 | 0.00 | 0.20 | 1.82 | 2.27 | 0.38 | 4.81 | 0.17 | | | 0.00 | 0.00 | 0.00 |
| 11 | 0.00 | 0.15 | 1.39 | 1.57 | 0.36 | 5.95 | 0.17 | | | 0.00 | 0.00 | 0.00 |
| 12 | 0.00 | 0.15 | 0.31 | 1.12 | 0.34 | 5.51 | 0.16 | | 0.06 | 0.00 | 0.00 | 0.00 |
| 13 | 0.00 | 0.15 | 1.15 | 0.39 | 0.32 | 11.58 | 0.16 | | 0.06 | 0.00 | 0.00 | 0.00 |
| 14 | 0.00 | 0.15 | 0.38 | 0.35 | 0.30 | 15.49 | 0.15 | | 0.06 | 0.00 | 0.00 | 0.00 |
| 15 | 0.00 | 0.26 | 0.33 | 0.32 | 0.30 | 8.52 | 0.14 | | 0.06 | 0.00 | 0.00 | 0.00 |
| 16 | 0.00 | 0.20 | 0.33 | 0.31 | 0.28 | 5.90 | 0.14 | | 0.06 | 0.00 | 0.00 | 0.00 |
| 17 | 0.00 | 0.20 | 0.33 | 0.29 | 0.30 | 4.40 | 0.14 | | 0.06 | 0.00 | 0.00 | 0.00 |
| 18 | 0.00 | 0.21 | 0.34 | 4.91 | 2.83 | 3.28 | 0.13 | | 0.06 | 0.00 | 0.00 | 0.00 |
| 19 | 0.00 | 0.22 | 0.39 | 14.30 | 1.66 | 2.53 | 0.13 | | 0.00 | 0.00 | 0.00 | 0.00 |
| 20 | 0.00 | 0.24 | 0.36 | 11.01 | 1.31 | 1.94 | 0.12 | | 0.00 | 0.00 | 0.00 | 0.00 |
| 21 | 0.00 | 0.25 | 1.09 | 5.89 | 1.07 | 1.62 | 0.12 | | 0.00 | 0.00 | 0.00 | 0.00 |
| 22 | 0.00 | 0.26 | 4.44 | 5.88 | 0.40 | 1.24 | 0.12 | | 0.00 | 0.00 | 0.00 | 0.00 |
| 23 | 0.00 | 0.27 | 2.02 | 8.49 | 0.37 | 0.39 | | | 0.00 | 0.00 | 0.00 | 0.00 |
| 24 | 0.00 | 0.32 | 0.36 | 5.96 | 0.35 | 0.37 | | | 0.00 | 0.00 | 0.00 | 0.00 |
| 25 | 0.00 | 0.38 | 0.34 | 4.57 | 0.33 | 0.36 | | | 0.00 | 0.00 | 0.00 | 0.00 |
| 26 | 0.00 | 0.33 | 0.27 | 3.67 | 0.31 | 0.33 | | | 0.00 | 0.00 | 0.00 | 0.00 |
| 27 | 0.00 | 0.34 | 0.24 | 2.98 | 0.30 | 0.31 | | | 0.00 | 0.00 | 0.00 | 0.00 |
| 28 | 0.00 | 0.35 | 0.22 | 2.45 | 0.29 | 0.29 | | | 0.00 | 0.00 | 0.00 | 0.00 |
| 29 | 0.00 | 0.36 | 0.19 | 2.13 | 0.27 | 0.27 | | | 0.00 | 0.00 | 0.00 | 0.00 |
| 30 | 0.00 | 0.38 | 0.18 | 2.07 | | 0.25 | | | 0.06 | 0.00 | 0.00 | 0.00 |
| 31 | 0.00 | | 0.17 | 4.01 | | 0.24 | | | | | | |
| Mean | | 0.20 | 0.86 | 4.19 | 1.07 | 5.48 | 0.16 | | 0.03 | 0.00 | 0.00 | 0.00 |
| Max Day | | 0.38 | 4.44 | 19.51 | 3.84 | 41.28 | 0.23 | | 0.06 | 0.00 | 0.00 | 0.00 |
| Min Day | | 0.00 | 0.17 | 0.16 | 0.27 | 0.24 | 0.12 | | 0.00 | 0.00 | 0.00 | 0.00 |
| Yield (ac-ft) | | 11.72 | 52.81 | 257.6 | 61.4 | 337.1 | 7.2 | | 0.95 | 0.29 | 0.29 | 0.29 |

| Water Year 2011 Annual Summary | | yr | day | cfs | |
|---------------------------------------|------|-----------|------------|------------|------|
| Mean Daily Flow | 1.17 | cfs | 1992 | 7/10 | 0.02 |
| Max. Daily Flow | 41.3 | cfs | 1993 | 7/21 | 0.04 |
| Min. Daily Flow | 0.00 | cfs | 1994 | 8/14 | 0.02 |
| 7-Day Low Flow | 0.00 | cfs | 1995 | 9/19 | 0.02 |
| Total Yield | 730 | ac-ft | 2002 | 8/8 | 0.01 |
| Normalized Yield | 0.22 | ac-ft/ac | 2003 | 8/23 | 0.01 |
| | | | 2004 | 8/27 | 0.00 |
| | | | 2005 | 9/30 | 0.05 |
| | | | 2006 | 9/17 | 0.06 |
| | | | 2007 | 9/6 | <.01 |
| | | | 2008 | 9/2 | 0.02 |
| | | | 2009 | 9/3 | 0.13 |
| | | | 2010 | 8/24 | 0.08 |
| | | | 2011 | 9/7 | 0.17 |
| | | | 2012 | 8/23 | 0.04 |
| | | | 2014 | 7/24 | 0.00 |
| | | | 2015 | 9/16 | 0.00 |
| | | | 2016 | 6/19 | 0.00 |

Approximate date and value of first minimum daily mean flow near the end of each water year.

Table 4. Mean Daily Water Temperature (°C)

Portero Creek, Water Year 2016

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-------|
| 1 | 15.67 | 13.19 | 8.88 | 5.65 | 9.48 | 10.76 | 11.42 | | | 13.10 | 14.15 | 14.30 |
| 2 | 15.28 | 13.84 | 9.08 | 6.98 | 9.45 | 10.23 | 12.12 | | | 13.21 | 14.21 | 14.14 |
| 3 | 14.86 | 13.01 | 9.30 | 8.01 | 9.12 | 11.67 | 12.16 | | | 13.48 | 13.76 | 13.86 |
| 4 | 14.75 | 11.81 | 9.45 | 9.08 | 9.25 | 12.34 | 11.34 | | | 13.72 | 13.71 | 13.94 |
| 5 | 14.02 | 11.36 | 9.32 | 9.83 | 8.93 | 13.23 | 11.42 | | | 13.76 | 13.78 | 13.81 |
| 6 | 14.27 | 10.69 | 9.47 | 9.76 | 8.97 | 12.44 | 12.17 | | | 13.59 | 13.67 | 13.06 |
| 7 | 14.42 | 10.47 | 9.83 | 9.65 | 9.50 | 11.71 | 12.77 | | | 13.72 | 13.79 | 13.06 |
| 8 | 14.71 | 10.42 | 9.98 | 9.05 | 9.87 | 11.67 | 13.04 | | | 13.92 | 13.80 | 13.79 |
| 9 | 14.32 | 10.79 | 10.08 | 9.70 | 9.96 | 12.10 | 13.31 | | | 13.94 | 14.00 | 13.39 |
| 10 | 14.22 | 10.56 | 10.42 | 9.83 | 9.95 | 12.39 | 12.86 | | | 13.44 | 13.95 | 13.68 |
| 11 | 14.43 | 9.85 | 10.51 | 10.35 | 10.19 | 12.25 | 12.81 | | | 12.95 | 13.96 | 13.81 |
| 12 | 14.02 | 9.64 | 10.16 | 9.60 | 10.21 | 11.56 | 12.65 | | 13.56 | 13.67 | 13.86 | 13.94 |
| 13 | 14.45 | 9.54 | 9.90 | 10.66 | 10.27 | 12.55 | 11.67 | | 13.46 | 13.44 | 13.54 | 13.69 |
| 14 | 15.25 | 9.57 | 9.24 | 9.24 | 10.57 | 12.70 | 11.46 | | 13.18 | 13.09 | 13.69 | 12.89 |
| 15 | 15.91 | 9.88 | 8.37 | 10.41 | 10.80 | 11.53 | 11.47 | | 12.88 | 13.37 | 13.78 | 12.73 |
| 16 | 16.14 | 10.07 | 7.21 | 10.91 | 10.81 | 11.55 | 11.10 | | 12.28 | 13.73 | 13.75 | 12.68 |
| 17 | 16.25 | 9.71 | 6.91 | 11.41 | 11.66 | 11.93 | 11.77 | | 12.92 | 13.58 | 13.72 | 12.56 |
| 18 | 16.01 | 10.01 | 6.92 | 11.67 | 11.65 | 12.23 | 11.75 | | 13.60 | 13.89 | 13.81 | 12.59 |
| 19 | 16.02 | 10.11 | 8.04 | 11.87 | 10.14 | 12.41 | 11.82 | | 13.47 | 13.71 | 13.88 | 13.07 |
| 20 | 15.13 | 10.42 | 7.99 | 11.28 | 10.49 | 12.54 | 11.23 | | 13.32 | 13.11 | 13.55 | 13.78 |
| 21 | 13.98 | 10.56 | 9.06 | 11.14 | 9.95 | 12.73 | 12.33 | | 13.17 | 13.50 | 13.96 | 13.48 |
| 22 | 13.46 | 10.53 | 10.80 | 11.98 | 9.84 | 11.91 | 12.23 | | 13.17 | 13.21 | 13.93 | 13.44 |
| 23 | 13.60 | 10.46 | 10.50 | 11.93 | 9.93 | 11.13 | | | 13.51 | 13.05 | 14.16 | 12.63 |
| 24 | 13.38 | 10.55 | 9.24 | 10.98 | 9.68 | 11.13 | | | 13.44 | 13.17 | 14.07 | 12.82 |
| 25 | 13.73 | 10.47 | 8.83 | 10.20 | 10.08 | 12.39 | | | 13.01 | 13.18 | 14.00 | 13.35 |
| 26 | 12.95 | 9.74 | 6.91 | 10.10 | 10.41 | 11.96 | | | 12.94 | 12.61 | 14.28 | 13.51 |
| 27 | 13.00 | 9.19 | 5.86 | 10.09 | 10.83 | 12.68 | | | 13.15 | 12.83 | 14.41 | 13.37 |
| 28 | 14.28 | 8.86 | 7.09 | 9.49 | 10.41 | 11.72 | | | 13.00 | 13.19 | 14.16 | 12.91 |
| 29 | 13.83 | 8.63 | 6.38 | 11.06 | 10.65 | 10.87 | | | 12.68 | 13.35 | 14.16 | 13.42 |
| 30 | 12.57 | 8.56 | 5.61 | 11.88 | | 10.31 | | | 12.88 | 13.33 | 14.10 | 12.98 |
| 31 | 12.76 | | 5.96 | 10.78 | | 11.71 | | | | 13.79 | 14.04 | |
| Mean Day | 14.44 | 10.42 | 8.62 | 10.15 | 10.10 | 11.88 | 12.04 | | 13.14 | 13.41 | 13.92 | 13.36 |
| Max Day | 16.25 | 13.84 | 10.80 | 11.98 | 11.66 | 13.23 | 13.31 | | 13.60 | 13.94 | 14.41 | 14.30 |
| Min Day | 12.57 | 8.56 | 5.61 | 5.65 | 8.93 | 10.23 | 11.10 | | 12.28 | 12.61 | 13.54 | 12.56 |

Table 5. Maximum Daily Water Temperature (°C)

Portero Creek, Water Year 2016

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-------|
| 1 | 16.11 | 14.09 | 9.08 | 6.40 | 10.22 | 11.95 | 10.29 | | | 13.74 | 14.67 | 14.47 |
| 2 | 15.82 | 14.77 | 9.36 | 7.78 | 10.47 | 11.57 | 11.29 | | | 13.86 | 14.80 | 14.59 |
| 3 | 15.31 | 13.39 | 9.50 | 8.64 | 10.24 | 12.69 | 11.53 | | | 14.19 | 14.38 | 14.12 |
| 4 | 15.26 | 12.57 | 9.58 | 9.66 | 10.22 | 12.92 | 10.12 | | | 14.47 | 14.08 | 14.19 |
| 5 | 14.99 | 11.95 | 9.56 | 10.14 | 10.09 | 13.73 | 9.70 | | | 14.50 | 14.13 | 14.24 |
| 6 | 15.10 | 11.23 | 9.69 | 10.08 | 10.25 | 13.38 | 10.55 | | | 14.17 | 14.01 | 13.82 |
| 7 | 15.11 | 10.99 | 10.04 | 10.17 | 10.74 | 12.07 | 12.01 | | | 14.37 | 14.51 | 13.63 |
| 8 | 15.60 | 11.08 | 10.14 | 9.86 | 11.05 | 12.26 | 12.65 | | | 14.65 | 14.20 | 14.27 |
| 9 | 15.25 | 11.09 | 10.23 | 10.23 | 11.34 | 12.84 | 12.95 | | | 14.96 | 14.57 | 13.81 |
| 10 | 15.08 | 10.73 | 10.60 | 10.29 | 11.31 | 13.13 | 12.63 | | | 14.32 | 14.49 | 14.07 |
| 11 | 15.28 | 10.37 | 10.60 | 10.95 | 11.40 | 12.76 | 12.42 | | | 13.88 | 14.45 | 14.18 |
| 12 | 14.99 | 10.02 | 10.36 | 10.37 | 11.40 | 12.41 | 11.85 | | 14.40 | 14.42 | 14.43 | 14.30 |
| 13 | 15.33 | 9.94 | 10.07 | 11.29 | 11.37 | 13.19 | 10.53 | | 13.99 | 14.35 | 14.36 | 14.05 |
| 14 | 15.94 | 9.95 | 9.64 | 10.22 | 11.26 | 13.24 | 10.41 | | 13.72 | 13.89 | 14.34 | 13.61 |
| 15 | 16.33 | 10.20 | 8.92 | 10.84 | 12.18 | 12.78 | 10.35 | | 13.49 | 14.10 | 14.31 | 13.57 |
| 16 | 16.47 | 10.23 | 7.95 | 11.66 | 12.04 | 13.05 | 9.36 | | 13.55 | 14.43 | 14.31 | 13.45 |
| 17 | 16.55 | 10.13 | 7.30 | 11.76 | 13.03 | 13.43 | 10.20 | | 14.01 | 14.19 | 14.19 | 13.37 |
| 18 | 16.27 | 10.30 | 7.57 | 11.92 | 12.12 | 13.05 | 10.02 | | 14.36 | 14.67 | 14.24 | 13.45 |
| 19 | 16.13 | 10.41 | 8.48 | 13.06 | 11.05 | 13.35 | 10.46 | | 14.75 | 14.54 | 14.35 | 13.72 |
| 20 | 15.96 | 10.74 | 8.38 | 11.87 | 11.56 | 13.69 | 9.37 | | 14.31 | 14.14 | 14.03 | 14.29 |
| 21 | 14.78 | 10.77 | 9.73 | 11.79 | 11.11 | 13.27 | 11.12 | | 14.42 | 14.52 | 14.35 | 13.85 |
| 22 | 14.28 | 10.73 | 12.33 | 12.99 | 11.27 | 12.57 | 12.08 | | 14.02 | 14.32 | 14.32 | 13.76 |
| 23 | 14.43 | 10.65 | 11.66 | 12.65 | 11.22 | 12.17 | | | 14.55 | 14.25 | 14.64 | 13.29 |
| 24 | 14.30 | 10.73 | 9.74 | 11.44 | 11.13 | 12.33 | | | 14.38 | 13.95 | 14.60 | 13.74 |
| 25 | 14.57 | 10.66 | 9.25 | 11.11 | 11.53 | 13.03 | | | 14.21 | 13.51 | 14.30 | 14.14 |
| 26 | 13.87 | 10.30 | 8.20 | 10.86 | 11.73 | 12.80 | | | 14.09 | 13.30 | 14.78 | 14.48 |
| 27 | 14.18 | 9.63 | 6.45 | 10.85 | 12.14 | 13.12 | | | 14.25 | 13.67 | 14.85 | 14.19 |
| 28 | 14.86 | 9.15 | 7.81 | 10.72 | 11.75 | 12.24 | | | 13.97 | 13.96 | 14.74 | 13.46 |
| 29 | 14.49 | 8.92 | 7.36 | 11.97 | 12.15 | 11.86 | | | 13.20 | 13.93 | 14.76 | 14.03 |
| 30 | 13.46 | 8.88 | 6.16 | 12.09 | | 11.51 | | | 13.45 | 13.92 | 14.77 | 13.50 |
| 31 | 13.91 | | 6.49 | 11.52 | | 12.57 | | | | 14.42 | 14.56 | |
| Mean Day | 15.16 | 10.82 | 9.10 | 10.81 | 11.29 | 12.74 | 11.00 | | 14.06 | 14.18 | 14.44 | 13.92 |
| Max Day | 16.55 | 14.77 | 12.33 | 13.06 | 13.03 | 13.73 | 12.95 | | 14.75 | 14.96 | 14.85 | 14.59 |
| Min Day | 13.46 | 8.88 | 6.16 | 6.40 | 10.09 | 11.51 | 9.36 | | 13.20 | 13.30 | 14.01 | 13.29 |

Table 6. Minimum Daily Water Temperature (°C)
Portero Creek, Water Year 2016

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-------|
| 1 | 15.33 | 12.20 | 8.70 | 4.87 | 8.75 | 9.37 | 10.29 | | | 12.60 | 13.80 | 14.11 |
| 2 | 14.49 | 13.39 | 8.91 | 6.35 | 8.74 | 8.44 | 11.29 | | | 12.64 | 13.82 | 13.63 |
| 3 | 14.50 | 12.60 | 9.14 | 7.43 | 7.87 | 10.67 | 11.53 | | | 12.94 | 13.00 | 13.57 |
| 4 | 14.07 | 11.22 | 9.30 | 8.63 | 8.09 | 11.79 | 10.12 | | | 13.16 | 13.39 | 13.73 |
| 5 | 12.92 | 10.91 | 9.14 | 9.49 | 7.58 | 12.83 | 9.70 | | | 13.31 | 13.57 | 13.39 |
| 6 | 13.31 | 10.01 | 9.35 | 9.39 | 7.68 | 11.87 | 10.55 | | | 13.15 | 13.44 | 12.07 |
| 7 | 13.59 | 9.85 | 9.69 | 9.19 | 8.27 | 11.32 | 12.01 | | | 13.28 | 13.25 | 12.22 |
| 8 | 14.03 | 9.82 | 9.87 | 8.24 | 8.61 | 10.93 | 12.65 | | | 13.36 | 13.35 | 13.47 |
| 9 | 13.27 | 10.61 | 9.96 | 9.21 | 8.60 | 11.66 | 12.95 | | | 12.88 | 13.61 | 12.81 |
| 10 | 13.24 | 10.37 | 10.23 | 9.18 | 8.39 | 11.58 | 12.63 | | | 12.36 | 13.53 | 13.28 |
| 11 | 13.48 | 9.36 | 10.37 | 9.89 | 8.81 | 11.75 | 12.42 | | | 11.71 | 13.58 | 13.46 |
| 12 | 12.88 | 9.17 | 10.03 | 8.54 | 8.86 | 10.49 | 11.85 | | 12.53 | 13.13 | 13.40 | 13.70 |
| 13 | 13.53 | 9.03 | 9.65 | 10.05 | 8.96 | 12.05 | 10.53 | | 13.07 | 12.81 | 12.57 | 13.28 |
| 14 | 14.56 | 9.12 | 8.94 | 8.11 | 9.02 | 11.91 | 10.41 | | 12.73 | 12.17 | 13.10 | 11.93 |
| 15 | 15.57 | 9.57 | 7.98 | 9.98 | 9.44 | 10.30 | 10.35 | | 12.36 | 12.67 | 13.30 | 11.73 |
| 16 | 15.87 | 9.87 | 6.76 | 10.24 | 9.35 | 10.15 | 9.36 | | 10.69 | 13.20 | 13.21 | 11.89 |
| 17 | 15.96 | 9.33 | 6.49 | 10.99 | 10.57 | 10.47 | 10.20 | | 11.66 | 13.07 | 13.27 | 11.66 |
| 18 | 15.58 | 9.68 | 6.37 | 11.25 | 10.76 | 11.37 | 10.02 | | 12.75 | 13.37 | 13.45 | 11.58 |
| 19 | 15.92 | 9.80 | 7.58 | 10.98 | 8.74 | 11.50 | 10.46 | | 12.21 | 13.08 | 13.54 | 12.32 |
| 20 | 14.27 | 10.16 | 7.50 | 10.50 | 9.53 | 11.21 | 9.37 | | 12.09 | 11.87 | 13.06 | 13.41 |
| 21 | 12.99 | 10.30 | 8.39 | 10.36 | 8.59 | 11.92 | 11.12 | | 11.73 | 12.59 | 13.64 | 13.12 |
| 22 | 12.56 | 10.28 | 9.64 | 11.19 | 8.22 | 11.07 | 12.08 | | 12.34 | 11.85 | 13.54 | 13.18 |
| 23 | 12.76 | 10.23 | 9.42 | 11.40 | 8.38 | 9.72 | | | 12.47 | 11.66 | 13.82 | 11.59 |
| 24 | 12.41 | 10.37 | 8.80 | 10.51 | 8.01 | 9.58 | | | 12.60 | 12.49 | 13.65 | 11.86 |
| 25 | 13.15 | 10.32 | 8.27 | 9.14 | 8.48 | 11.85 | | | 11.65 | 12.87 | 13.67 | 12.50 |
| 26 | 11.85 | 9.47 | 6.26 | 9.06 | 8.96 | 10.62 | | | 11.55 | 11.68 | 13.89 | 12.49 |
| 27 | 12.14 | 8.93 | 5.08 | 9.37 | 9.68 | 12.27 | | | 12.02 | 11.96 | 14.03 | 12.46 |
| 28 | 13.72 | 8.64 | 6.39 | 8.15 | 8.94 | 11.21 | | | 11.94 | 12.39 | 13.79 | 12.13 |
| 29 | 13.14 | 8.41 | 5.74 | 10.44 | 8.96 | 9.78 | | | 12.20 | 12.80 | 13.73 | 12.70 |
| 30 | 11.38 | 8.33 | 4.93 | 11.55 | | 8.77 | | | 12.46 | 12.64 | 13.50 | 12.59 |
| 31 | 11.73 | | 5.29 | 10.28 | | 10.81 | | | | 13.32 | 13.39 | |
| Mean Day | 13.68 | 10.05 | 8.20 | 9.48 | 8.79 | 10.94 | 11.00 | | 12.16 | 12.68 | 13.48 | 12.73 |
| Max Day | 15.96 | 13.39 | 10.37 | 11.55 | 10.76 | 12.83 | 12.95 | | 13.07 | 13.37 | 14.03 | 14.11 |
| Min Day | 11.38 | 8.33 | 4.93 | 4.87 | 7.58 | 8.44 | 9.36 | | 10.69 | 11.66 | 12.57 | 11.58 |

Table 7. Mean Daily Specific Conductance (um hos/cm @ 25 °C)
Portero Creek, Water Year 2016

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----------------|-------|---------|---------|--------|--------|--------|--------|-----|--------|--------|--------|--------|
| 1 | 11.60 | 6.63 | 1197.51 | 683.70 | 277.58 | 456.56 | 540.58 | | | 851.79 | 828.34 | 867.49 |
| 2 | 11.15 | 541.28 | 1197.50 | 692.39 | 306.26 | 467.50 | 554.46 | | | 842.38 | 833.61 | 875.75 |
| 3 | 10.71 | 1424.53 | 1198.41 | 716.00 | 323.77 | 478.62 | 568.27 | | | 836.17 | 833.43 | 875.97 |
| 4 | 10.21 | 268.48 | 1203.09 | 746.74 | 332.65 | 491.88 | 581.54 | | | 822.47 | 831.27 | 877.05 |
| 5 | 9.95 | 1492.47 | 1206.22 | 592.41 | 344.66 | 463.31 | 593.91 | | | 820.45 | 833.69 | 885.53 |
| 6 | 9.35 | 1559.68 | 1207.84 | 219.73 | 357.10 | 189.34 | 607.15 | | | 807.89 | 836.15 | 883.07 |
| 7 | 8.93 | 1459.19 | 1211.66 | 191.04 | 370.87 | 161.28 | 619.65 | | | 802.33 | 838.53 | 880.20 |
| 8 | 8.60 | 1159.19 | 1220.07 | 233.92 | 380.42 | 194.87 | 633.29 | | | 802.93 | 845.41 | 881.85 |
| 9 | 8.33 | 1059.32 | 1232.27 | 277.41 | 392.19 | 231.60 | 644.09 | | | 807.30 | 869.68 | 885.05 |
| 10 | 8.06 | 1062.42 | 1244.94 | 316.09 | 402.24 | 260.89 | 650.85 | | | 805.45 | 875.28 | 890.77 |
| 11 | 7.73 | 1067.90 | 1174.61 | 350.39 | 414.38 | 273.30 | 653.68 | | | 801.90 | 878.74 | 890.83 |
| 12 | 7.29 | 1067.38 | 1086.54 | 381.92 | 427.73 | 240.92 | 657.55 | | 767.68 | 800.89 | 875.30 | 890.64 |
| 13 | 7.01 | 1069.14 | 1006.91 | 401.56 | 438.57 | 235.00 | 660.51 | | 765.61 | 798.56 | 871.90 | 888.54 |
| 14 | 6.62 | 1086.80 | 856.81 | 418.52 | 450.13 | 197.41 | 665.58 | | 777.31 | 798.08 | 874.83 | 883.01 |
| 15 | 6.32 | 1118.22 | 878.67 | 439.04 | 461.02 | 229.87 | 671.94 | | 786.43 | 799.40 | 881.53 | 879.43 |
| 16 | 6.11 | 1148.23 | 906.26 | 456.04 | 471.02 | 257.32 | 677.99 | | 811.89 | 798.84 | 885.71 | 877.67 |
| 17 | 5.88 | 1175.41 | 926.27 | 463.30 | 481.42 | 276.91 | 684.75 | | 834.41 | 798.47 | 884.94 | 878.79 |
| 18 | 5.65 | 1193.02 | 944.72 | 303.28 | 315.81 | 297.42 | 691.29 | | 858.49 | 800.16 | 885.95 | 878.80 |
| 19 | 5.57 | 1203.04 | 967.68 | 213.84 | 313.79 | 314.83 | 698.09 | | 878.97 | 800.83 | 888.33 | 880.61 |
| 20 | 5.86 | 1210.28 | 970.58 | 194.29 | 338.61 | 330.90 | 703.91 | | 871.98 | 801.57 | 881.52 | 883.41 |
| 21 | 6.18 | 1216.76 | 974.50 | 236.44 | 356.44 | 346.41 | 710.44 | | 878.64 | 803.18 | 873.82 | 880.71 |
| 22 | 6.35 | 1222.64 | 717.07 | 262.20 | 369.73 | 356.67 | 712.79 | | 896.08 | 803.38 | 873.95 | 881.11 |
| 23 | 6.49 | 1224.56 | 384.80 | 222.30 | 380.40 | 374.94 | | | 907.64 | 807.15 | 874.21 | 878.64 |
| 24 | 6.54 | 1224.68 | 476.14 | 244.00 | 390.69 | 409.39 | | | 919.40 | 810.30 | 874.60 | 881.16 |
| 25 | 6.71 | 1216.95 | 476.60 | 266.64 | 399.61 | 444.03 | | | 912.44 | 811.34 | 877.99 | 883.49 |
| 26 | 6.73 | 1209.21 | 501.90 | 286.84 | 407.41 | 463.72 | | | 901.28 | 812.71 | 878.30 | 885.72 |
| 27 | 6.82 | 1203.77 | 539.74 | 308.74 | 417.77 | 477.71 | | | 896.60 | 815.64 | 871.52 | 887.24 |
| 28 | 6.87 | 1200.42 | 573.65 | 331.69 | 432.69 | 489.69 | | | 905.67 | 817.09 | 864.97 | 887.93 |
| 29 | 6.90 | 1198.69 | 605.93 | 353.02 | 446.01 | 501.05 | | | 906.65 | 821.30 | 863.19 | 890.92 |
| 30 | 6.82 | 1197.88 | 635.85 | 368.91 | | 512.66 | | | 877.52 | 823.44 | 862.84 | 888.74 |
| 31 | 6.77 | | 665.44 | 321.05 | | 525.38 | | | | 826.85 | 863.41 | 885.53 |
| Mean Day | 7.55 | 1116.27 | 915.81 | 370.76 | 386.24 | 353.27 | 644.65 | | 860.77 | 811.30 | 864.93 | 882.76 |
| Max Day | 11.60 | 1559.68 | 1244.94 | 746.74 | 481.42 | 525.38 | 712.79 | | 919.40 | 851.79 | 888.33 | 890.92 |
| Min Day | 5.57 | 6.63 | 384.80 | 191.04 | 277.58 | 161.28 | 540.58 | | 765.61 | 798.08 | 828.34 | 867.49 |

Table 8. Mean daily flow, San Clemente Creek, Water Year 2016
 Santa Lucia Preserve, Monterey County, California

Values are cfs (unless otherwise noted)

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|----------------------|------|------|------|-------|-------|-------|-------|------|------|------|------|------|
| 1 | 0.05 | 0.05 | 0.13 | 1.19 | 4.37 | 2.18 | 4.33 | 2.00 | 0.44 | 0.10 | 0.05 | 0.05 |
| 2 | 0.05 | 0.15 | 0.10 | 0.53 | 3.95 | 2.03 | 4.11 | 2.00 | 0.42 | 0.10 | 0.05 | 0.05 |
| 3 | 0.03 | 0.14 | 0.10 | 0.50 | 3.72 | 2.14 | 3.92 | 1.93 | 0.38 | 0.10 | 0.05 | 0.05 |
| 4 | 0.03 | 0.12 | 0.13 | 0.54 | 3.50 | 7.76 | 3.85 | 1.85 | 0.35 | 0.09 | 0.05 | 0.05 |
| 5 | 0.05 | 0.11 | 0.13 | 3.61 | 3.32 | 16.85 | 3.64 | 1.84 | 0.34 | 0.09 | 0.05 | 0.05 |
| 6 | 0.06 | 0.10 | 0.13 | 12.20 | 3.11 | 21.80 | 3.37 | 1.95 | 0.33 | 0.09 | 0.05 | 0.05 |
| 7 | 0.05 | 0.08 | 0.12 | 9.54 | 2.90 | 14.10 | 3.21 | 2.00 | 0.33 | 0.09 | 0.05 | 0.04 |
| 8 | 0.04 | 0.10 | 0.12 | 6.46 | 2.76 | 11.18 | 3.18 | 1.86 | 0.33 | 0.09 | 0.05 | 0.05 |
| 9 | 0.05 | 0.13 | 0.12 | 4.62 | 2.65 | 9.26 | 3.13 | 1.82 | 0.33 | 0.09 | 0.05 | 0.05 |
| 10 | 0.04 | 0.14 | 0.13 | 3.79 | 2.57 | 14.75 | 3.27 | 1.78 | 0.34 | 0.09 | 0.05 | 0.05 |
| 11 | 0.04 | 0.11 | 0.24 | 3.27 | 2.44 | 13.19 | 3.29 | 1.73 | 0.32 | 0.08 | 0.05 | 0.05 |
| 12 | 0.04 | 0.10 | 0.20 | 2.90 | 2.39 | 17.35 | 3.33 | 1.68 | 0.30 | 0.08 | 0.05 | 0.05 |
| 13 | 0.04 | 0.10 | 0.28 | 2.83 | 2.36 | 18.34 | 3.17 | 1.71 | 0.32 | 0.08 | 0.04 | 0.05 |
| 14 | 0.03 | 0.09 | 0.30 | 2.64 | 2.25 | 14.47 | 3.08 | 1.66 | 0.33 | 0.07 | 0.04 | 0.05 |
| 15 | 0.03 | 0.20 | 0.23 | 2.32 | 2.06 | 12.34 | 2.93 | 1.57 | 0.34 | 0.07 | 0.04 | 0.05 |
| 16 | 0.03 | 0.16 | 0.21 | 2.40 | 1.93 | 10.79 | 2.84 | 1.54 | 0.32 | 0.07 | 0.05 | 0.04 |
| 17 | 0.04 | 0.13 | 0.18 | 2.16 | 2.47 | 9.53 | 2.66 | 1.45 | 0.29 | 0.07 | 0.04 | 0.04 |
| 18 | 0.05 | 0.11 | 0.14 | 5.84 | 6.05 | 8.52 | 2.59 | 1.33 | 0.27 | 0.07 | 0.05 | 0.03 |
| 19 | 0.09 | 0.10 | 0.17 | 11.65 | 3.62 | 7.74 | 2.58 | 1.34 | 0.25 | 0.07 | 0.05 | 0.03 |
| 20 | 0.08 | 0.10 | 0.19 | 8.68 | 3.24 | 7.33 | 2.46 | 1.46 | 0.22 | 0.07 | 0.05 | 0.03 |
| 21 | 0.07 | 0.10 | 0.16 | 6.27 | 3.11 | 7.17 | 2.40 | 1.53 | 0.19 | 0.07 | 0.05 | 0.04 |
| 22 | 0.07 | 0.10 | 2.11 | 6.66 | 2.94 | 6.78 | 2.76 | 1.46 | 0.17 | 0.06 | 0.05 | 0.05 |
| 23 | 0.07 | 0.10 | 1.91 | 8.43 | 2.76 | 6.32 | 2.70 | 1.36 | 0.16 | 0.05 | 0.05 | 0.05 |
| 24 | 0.06 | 0.11 | 1.60 | 7.13 | 2.66 | 5.85 | 2.51 | 1.33 | 0.15 | 0.06 | 0.05 | 0.05 |
| 25 | 0.06 | 0.13 | 2.57 | 6.28 | 2.53 | 5.48 | 2.52 | 1.36 | 0.14 | 0.06 | 0.05 | 0.04 |
| 26 | 0.06 | 0.14 | 2.09 | 5.54 | 2.45 | 5.21 | 2.49 | 1.29 | 0.12 | 0.06 | 0.05 | 0.04 |
| 27 | 0.06 | 0.14 | 1.80 | 4.88 | 2.41 | 5.11 | 2.35 | 1.21 | 0.10 | 0.05 | 0.05 | 0.04 |
| 28 | 0.05 | 0.14 | 1.44 | 4.37 | 2.38 | 4.88 | 2.26 | 1.06 | 0.09 | 0.05 | 0.05 | 0.04 |
| 29 | 0.06 | 0.14 | 1.54 | 3.75 | 2.21 | 4.72 | 2.24 | 1.06 | 0.10 | 0.05 | 0.05 | 0.05 |
| 30 | 0.06 | 0.13 | 1.41 | 3.75 | | 4.50 | 2.10 | 0.54 | 0.10 | 0.05 | 0.04 | 0.06 |
| 31 | 0.06 | | 1.24 | 5.10 | | | | 0.48 | | 0.05 | 0.04 | |
| Mean | 0.05 | 0.12 | 0.68 | 4.83 | 2.94 | 9.26 | 2.98 | 1.52 | 0.26 | 0.07 | 0.05 | 0.05 |
| Max Day | 0.09 | 0.20 | 2.57 | 12.20 | 6.05 | 21.80 | 4.33 | 2.00 | 0.44 | 0.10 | 0.05 | 0.06 |
| Min Day | 0.03 | 0.05 | 0.10 | 0.50 | 1.93 | 2.03 | 2.10 | 0.48 | 0.09 | 0.05 | 0.04 | 0.03 |
| Yield (ac-ft) | 3.2 | 7.1 | 42.1 | 297.2 | 168.9 | 550.8 | 177.0 | 93.5 | 15.7 | 4.50 | 2.94 | 2.70 |

| Water Year 2015 Annual Summary | | | yr | day | cfs |
|---------------------------------------|------|----------|-----------|------------|------------|
| Mean Daily Flow | 1.89 | cfs | 1991 | 9/17 | 0.03 |
| Max. Daily Flow | 21.8 | cfs | 1992 | 8/27 | 0.06 |
| Min. Daily Flow | 0.03 | cfs | 1993 | 8/27 | 0.10 |
| 7-Day Low Flow | 0.04 | cfs | 1994 | 7/16 | 0.04 |
| Total Yield | 1366 | ac-ft | 1995 | 9/29 | 0.14 |
| Normalized Yield | 0.42 | ac-ft/ac | 2002 | 8/25 | 0.01 |
| | | | 2003 | 9/14 | 0.03 |
| | | | 2004 | 8/27 | 0.02 |
| | | | 2005 | 9/30 | 0.11 |
| | | | 2006 | 9/23 | 0.17 |
| | | | 2007 | 8/4 | 0.03 |
| | | | 2008 | 8/26 | 0.07 |
| | | | 2009 | 9/4 | 0.03 |
| | | | 2010 | 9/5 | 0.01 |
| | | | 2011 | 9/23 | 0.17 |
| | | | 2012 | 9/30 | 0.04 |
| | | | 2014 | 8/2 | <0.01 |
| | | | 2015 | 9/27 | 0.02 |
| | | | 2016 | 9/18 | 0.03 |

Approximate date and value of first minimum daily mean flow near the end of each water year.

Table 9. Mean Daily Water Temperature
San Clemente Creek, Water Year 2016

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----------------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 15.13 | 12.57 | 6.74 | 4.73 | 7.91 | 9.38 | 9.96 | 11.38 | 13.87 | 14.14 | 14.36 | 13.61 |
| 2 | 14.68 | 12.61 | 7.31 | 6.20 | 8.14 | 10.61 | 10.45 | 11.65 | 13.80 | 14.02 | 14.30 | 12.92 |
| 3 | 13.81 | 11.80 | 7.95 | 7.27 | 7.75 | 11.40 | 10.84 | 11.98 | 14.18 | 14.01 | 14.00 | 13.11 |
| 4 | 13.89 | 10.36 | 7.92 | 8.29 | 8.00 | 12.08 | 10.47 | 12.21 | 14.52 | 14.12 | 13.80 | 12.95 |
| 5 | 13.53 | 9.66 | 7.02 | 8.92 | 7.80 | 11.30 | 10.80 | 12.18 | 14.25 | 13.98 | 13.96 | 12.64 |
| 6 | 13.58 | 9.46 | 7.62 | 8.30 | 7.98 | 10.54 | 11.81 | 12.09 | 13.75 | 13.42 | 13.54 | 12.73 |
| 7 | 13.62 | 9.30 | 8.47 | 8.32 | 8.48 | 10.71 | 12.36 | 11.74 | 14.05 | 13.62 | 13.24 | 13.34 |
| 8 | 14.22 | 9.43 | 8.41 | 7.57 | 8.95 | 11.55 | 12.12 | 12.47 | 13.79 | 14.02 | 13.21 | 13.60 |
| 9 | 14.15 | 9.82 | 8.50 | 8.51 | 9.17 | 11.55 | 12.16 | 12.52 | 13.52 | 14.27 | 13.61 | 13.66 |
| 10 | 14.07 | 9.47 | 9.30 | 8.72 | 9.17 | 10.93 | 11.58 | 12.28 | 13.09 | 13.55 | 13.60 | 13.72 |
| 11 | 14.12 | 8.38 | 8.72 | 9.04 | 9.52 | 10.62 | 11.41 | 12.47 | 12.63 | 13.31 | 13.78 | 13.52 |
| 12 | 14.06 | 8.16 | 8.47 | 8.53 | 9.52 | 11.51 | 10.88 | 12.72 | 13.50 | 13.37 | 14.10 | 13.35 |
| 13 | 14.52 | 8.08 | 7.97 | 9.45 | 9.48 | 11.52 | 10.48 | 12.33 | 13.39 | 13.47 | 14.65 | 12.54 |
| 14 | 15.03 | 8.30 | 7.73 | 7.94 | 9.35 | 10.60 | 10.24 | 12.12 | 12.59 | 14.37 | 14.95 | 12.28 |
| 15 | 15.42 | 8.67 | 6.94 | 8.96 | 9.83 | 10.86 | 10.68 | 12.82 | 11.99 | 14.15 | 14.56 | 12.41 |
| 16 | 15.28 | 8.38 | 5.91 | 9.50 | 9.92 | 11.32 | 10.47 | 12.88 | 11.91 | 14.12 | 14.10 | 12.38 |
| 17 | 15.08 | 8.06 | 6.00 | 10.08 | 10.96 | 11.35 | 11.31 | 12.83 | 12.97 | 13.66 | 13.98 | 12.82 |
| 18 | 14.56 | 8.54 | 6.09 | 10.38 | 10.35 | 11.40 | 11.34 | 13.48 | 13.65 | 13.71 | 14.18 | 13.19 |
| 19 | 14.56 | 8.76 | 7.46 | 10.94 | 9.03 | 11.89 | 11.71 | 12.92 | 13.86 | 13.51 | 14.21 | 13.83 |
| 20 | 13.75 | 9.32 | 7.12 | 9.93 | 9.26 | 11.67 | 11.04 | 11.61 | 13.88 | 13.39 | 14.18 | 14.33 |
| 21 | 13.08 | 9.37 | 8.44 | 9.85 | 9.00 | 10.80 | 11.21 | 10.91 | 14.11 | 13.45 | 14.17 | 13.64 |
| 22 | 12.81 | 9.34 | 9.91 | 11.13 | 8.75 | 10.22 | 11.45 | 10.61 | 13.88 | 13.56 | 14.25 | 13.14 |
| 23 | 12.87 | 9.25 | 9.07 | 10.74 | 8.81 | 10.46 | 11.12 | 11.05 | 13.47 | 14.21 | 14.20 | 12.17 |
| 24 | 12.97 | 9.18 | 7.88 | 10.07 | 9.02 | 10.95 | 11.15 | 11.78 | 13.68 | 13.61 | 14.02 | 12.63 |
| 25 | 13.15 | 8.69 | 7.46 | 9.17 | 9.49 | 10.77 | 10.36 | 11.83 | 14.01 | 13.70 | 13.67 | 13.34 |
| 26 | 12.25 | 7.25 | 5.66 | 8.96 | 9.78 | 11.37 | 9.97 | 12.34 | 14.30 | 14.02 | 14.03 | 13.57 |
| 27 | 12.62 | 6.48 | 4.83 | 9.03 | 9.76 | 10.16 | 10.50 | 12.12 | 15.25 | 14.65 | 14.35 | 13.65 |
| 28 | 13.40 | 6.06 | 6.14 | 8.71 | 9.54 | 9.36 | 10.79 | 12.97 | 15.72 | 14.65 | 14.11 | 13.62 |
| 29 | 12.74 | 5.78 | 5.30 | 10.32 | 9.83 | 9.19 | 10.97 | 12.96 | 15.02 | 14.74 | 14.02 | 13.35 |
| 30 | 11.88 | 6.09 | 4.65 | 10.68 | | 9.99 | 11.03 | 13.04 | 14.26 | 14.81 | 13.95 | 12.56 |
| 31 | 12.40 | | 4.95 | 9.26 | | | | 13.62 | | 14.59 | 14.03 | |
| Mean Day | 13.78 | 8.89 | 7.29 | 9.02 | 9.12 | 10.87 | 11.02 | 12.26 | 13.76 | 13.94 | 14.04 | 13.15 |
| Max Day | 15.42 | 12.61 | 9.91 | 11.13 | 10.96 | 12.08 | 12.36 | 13.62 | 15.72 | 14.81 | 14.95 | 14.33 |
| Min Day | 11.88 | 5.78 | 4.65 | 4.73 | 7.75 | 9.19 | 9.96 | 10.61 | 11.91 | 13.31 | 13.21 | 12.17 |

Table 10. Maximum Daily Water Temperature (°C)

San Clemente Creek, Water Year 2016

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 15.68 | 12.99 | 7.37 | 5.53 | 8.77 | 10.57 | 11.71 | 12.78 | 15.37 | 15.66 | 15.37 | 14.93 |
| 2 | 15.34 | 13.03 | 8.15 | 6.91 | 8.80 | 11.40 | 12.27 | 12.95 | 15.40 | 15.53 | 15.23 | 14.41 |
| 3 | 14.73 | 12.27 | 8.66 | 7.87 | 8.74 | 11.87 | 12.14 | 13.09 | 15.86 | 15.52 | 15.65 | 14.28 |
| 4 | 14.45 | 10.83 | 8.33 | 8.67 | 8.92 | 12.48 | 11.96 | 12.96 | 15.83 | 15.63 | 15.45 | 13.94 |
| 5 | 14.24 | 10.46 | 7.78 | 9.18 | 8.66 | 12.05 | 12.78 | 12.76 | 15.70 | 15.64 | 15.25 | 13.70 |
| 6 | 14.30 | 10.23 | 8.31 | 8.62 | 8.98 | 10.84 | 13.69 | 12.35 | 15.17 | 15.00 | 15.26 | 13.97 |
| 7 | 14.45 | 10.10 | 9.04 | 8.81 | 9.48 | 11.49 | 12.93 | 12.03 | 15.52 | 15.23 | 15.35 | 14.52 |
| 8 | 15.03 | 10.33 | 9.01 | 8.35 | 9.89 | 12.61 | 12.38 | 13.45 | 14.94 | 15.57 | 15.38 | 14.46 |
| 9 | 14.89 | 10.18 | 9.12 | 9.10 | 10.12 | 12.64 | 12.53 | 13.27 | 14.79 | 16.02 | 15.51 | 14.68 |
| 10 | 14.84 | 9.86 | 9.72 | 9.14 | 10.09 | 11.34 | 12.01 | 13.53 | 14.43 | 15.10 | 14.79 | 14.66 |
| 11 | 14.81 | 8.98 | 9.16 | 9.44 | 10.43 | 11.47 | 11.76 | 13.78 | 14.18 | 15.08 | 15.36 | 14.38 |
| 12 | 14.94 | 8.83 | 8.72 | 9.13 | 10.20 | 12.24 | 11.32 | 13.86 | 14.96 | 15.00 | 15.91 | 14.23 |
| 13 | 15.33 | 8.92 | 8.50 | 9.79 | 10.10 | 12.03 | 11.70 | 12.99 | 14.63 | 15.21 | 16.90 | 13.21 |
| 14 | 15.56 | 9.11 | 7.94 | 8.75 | 10.21 | 11.86 | 11.27 | 13.32 | 13.65 | 16.18 | 16.67 | 13.22 |
| 15 | 16.00 | 8.97 | 7.68 | 9.25 | 10.63 | 12.41 | 11.55 | 13.74 | 12.99 | 15.76 | 16.19 | 13.44 |
| 16 | 15.78 | 8.95 | 6.43 | 10.14 | 10.79 | 12.97 | 12.15 | 14.18 | 13.49 | 15.78 | 16.02 | 13.43 |
| 17 | 15.42 | 8.92 | 6.56 | 10.37 | 11.29 | 12.93 | 12.84 | 14.41 | 14.47 | 15.39 | 15.70 | 13.98 |
| 18 | 14.96 | 9.23 | 6.96 | 10.60 | 10.85 | 12.94 | 12.94 | 15.06 | 14.77 | 15.38 | 15.18 | 14.29 |
| 19 | 14.95 | 9.43 | 7.85 | 12.13 | 9.88 | 13.21 | 13.08 | 13.77 | 15.48 | 15.28 | 15.68 | 14.85 |
| 20 | 14.27 | 10.02 | 7.77 | 10.54 | 10.26 | 12.42 | 12.40 | 12.03 | 15.27 | 15.28 | 15.79 | 15.12 |
| 21 | 13.77 | 10.00 | 8.96 | 10.65 | 9.82 | 11.53 | 12.33 | 11.69 | 15.89 | 15.32 | 15.78 | 14.31 |
| 22 | 13.48 | 10.03 | 10.90 | 11.81 | 9.88 | 11.80 | 11.93 | 11.72 | 15.44 | 15.52 | 15.70 | 13.64 |
| 23 | 13.68 | 9.57 | 10.26 | 11.34 | 9.86 | 12.17 | 12.00 | 12.18 | 15.08 | 16.16 | 15.82 | 12.99 |
| 24 | 13.77 | 9.67 | 8.26 | 10.37 | 10.13 | 12.29 | 11.62 | 12.43 | 15.21 | 14.37 | 15.62 | 13.68 |
| 25 | 13.72 | 9.04 | 7.79 | 9.95 | 10.54 | 12.31 | 10.84 | 12.86 | 15.81 | 14.79 | 15.21 | 14.30 |
| 26 | 13.06 | 7.94 | 6.66 | 9.78 | 10.65 | 12.26 | 10.94 | 13.50 | 16.04 | 15.32 | 15.47 | 14.53 |
| 27 | 13.35 | 6.95 | 5.41 | 9.92 | 10.61 | 10.72 | 11.01 | 13.72 | 16.95 | 15.30 | 15.81 | 14.63 |
| 28 | 13.88 | 6.66 | 6.76 | 9.77 | 10.44 | 10.76 | 11.62 | 14.52 | 17.32 | 15.37 | 15.67 | 14.46 |
| 29 | 13.43 | 6.43 | 6.12 | 11.16 | 10.60 | 10.94 | 11.73 | 14.36 | 16.56 | 15.53 | 15.46 | 14.20 |
| 30 | 12.60 | 7.09 | 5.30 | 11.11 | | 11.42 | 12.11 | 14.69 | 15.83 | 15.46 | 15.48 | 13.34 |
| 31 | 13.32 | | 5.43 | 10.11 | | | | 15.43 | | 15.50 | 15.39 | |
| Mean Day | 14.45 | 9.50 | 7.90 | 9.62 | 9.99 | 11.93 | 12.05 | 13.34 | 15.23 | 15.42 | 15.61 | 14.13 |
| Max Day | 16.00 | 13.03 | 10.90 | 12.13 | 11.29 | 13.21 | 13.69 | 15.43 | 17.32 | 16.18 | 16.90 | 15.12 |
| Min Day | 12.60 | 6.43 | 5.30 | 5.53 | 8.66 | 10.57 | 10.84 | 11.69 | 12.99 | 14.37 | 14.79 | 12.99 |

Table 11. Minimum Daily Water Temperature
San Clemente Creek, Water Year 2016

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----------------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 14.75 | 11.86 | 6.00 | 3.89 | 7.40 | 7.97 | 8.21 | 9.65 | 12.00 | 12.79 | 13.29 | 12.61 |
| 2 | 14.00 | 12.20 | 6.51 | 5.46 | 7.54 | 9.74 | 8.58 | 10.09 | 11.79 | 12.58 | 13.30 | 11.28 |
| 3 | 13.05 | 10.85 | 7.22 | 6.72 | 6.71 | 10.88 | 9.51 | 10.77 | 12.05 | 12.38 | 12.35 | 12.15 |
| 4 | 13.32 | 9.80 | 7.21 | 7.84 | 7.10 | 11.73 | 8.97 | 11.28 | 13.29 | 12.61 | 12.54 | 12.34 |
| 5 | 12.65 | 8.77 | 6.17 | 8.65 | 6.82 | 10.72 | 8.92 | 11.53 | 12.53 | 12.62 | 13.23 | 11.41 |
| 6 | 12.74 | 8.61 | 6.94 | 7.77 | 6.97 | 10.17 | 9.82 | 11.76 | 11.82 | 11.84 | 12.33 | 11.28 |
| 7 | 12.64 | 8.39 | 7.97 | 7.94 | 7.50 | 10.06 | 11.67 | 11.32 | 12.45 | 12.11 | 11.62 | 11.97 |
| 8 | 13.48 | 8.34 | 7.78 | 6.75 | 7.91 | 10.63 | 11.80 | 11.62 | 12.37 | 12.63 | 11.45 | 12.58 |
| 9 | 13.39 | 9.30 | 7.80 | 8.00 | 8.17 | 10.51 | 11.80 | 11.95 | 12.10 | 12.84 | 12.38 | 12.62 |
| 10 | 13.22 | 8.79 | 8.94 | 8.24 | 8.11 | 10.51 | 11.30 | 10.90 | 11.78 | 12.05 | 12.62 | 12.66 |
| 11 | 13.36 | 7.62 | 8.54 | 8.59 | 8.54 | 9.53 | 11.02 | 11.08 | 10.58 | 11.31 | 12.50 | 12.57 |
| 12 | 13.07 | 7.34 | 7.97 | 7.71 | 8.68 | 10.95 | 10.26 | 11.55 | 11.94 | 11.70 | 12.75 | 12.63 |
| 13 | 13.56 | 7.11 | 7.46 | 8.60 | 8.76 | 10.62 | 9.29 | 11.72 | 12.17 | 11.43 | 13.17 | 11.70 |
| 14 | 14.39 | 7.44 | 7.36 | 7.15 | 8.43 | 9.41 | 9.09 | 10.65 | 11.74 | 12.82 | 13.73 | 11.11 |
| 15 | 15.04 | 8.24 | 6.15 | 8.75 | 8.97 | 9.47 | 9.91 | 12.08 | 11.21 | 12.41 | 13.20 | 11.31 |
| 16 | 14.92 | 7.91 | 5.37 | 8.81 | 8.93 | 9.86 | 8.63 | 11.67 | 9.93 | 12.67 | 12.55 | 11.11 |
| 17 | 14.80 | 7.18 | 5.42 | 9.68 | 10.44 | 9.87 | 9.60 | 11.07 | 11.17 | 12.11 | 12.37 | 11.62 |
| 18 | 14.09 | 7.79 | 5.34 | 10.02 | 9.50 | 9.82 | 9.43 | 11.76 | 12.33 | 12.31 | 13.20 | 11.89 |
| 19 | 14.33 | 7.99 | 6.98 | 9.89 | 7.97 | 10.47 | 10.28 | 12.04 | 12.20 | 12.04 | 13.16 | 12.64 |
| 20 | 13.13 | 8.63 | 6.40 | 9.14 | 8.30 | 10.99 | 9.30 | 10.68 | 12.30 | 11.69 | 13.11 | 13.62 |
| 21 | 12.30 | 8.65 | 7.78 | 9.04 | 8.08 | 10.34 | 9.92 | 10.29 | 12.17 | 11.77 | 13.11 | 13.01 |
| 22 | 12.04 | 8.58 | 8.89 | 10.48 | 7.55 | 8.66 | 10.82 | 9.32 | 12.01 | 11.62 | 13.29 | 12.48 |
| 23 | 12.02 | 8.71 | 7.76 | 10.35 | 7.65 | 8.85 | 10.19 | 9.50 | 11.36 | 12.17 | 13.12 | 11.07 |
| 24 | 12.05 | 8.69 | 7.64 | 9.61 | 7.85 | 9.77 | 10.66 | 11.25 | 12.02 | 12.48 | 12.76 | 11.39 |
| 25 | 12.35 | 7.97 | 6.69 | 8.22 | 8.39 | 9.14 | 9.78 | 10.93 | 12.05 | 12.47 | 12.39 | 12.25 |
| 26 | 11.30 | 6.72 | 5.09 | 8.02 | 8.76 | 10.73 | 8.58 | 11.42 | 12.18 | 12.35 | 13.19 | 12.48 |
| 27 | 11.83 | 5.97 | 4.11 | 8.30 | 8.78 | 9.38 | 10.05 | 10.39 | 13.41 | 13.83 | 13.74 | 12.62 |
| 28 | 12.90 | 5.45 | 5.35 | 7.54 | 8.49 | 7.99 | 9.90 | 11.26 | 14.15 | 13.77 | 13.29 | 12.72 |
| 29 | 12.07 | 5.11 | 4.85 | 9.51 | 8.91 | 7.41 | 10.14 | 11.55 | 13.60 | 13.77 | 12.93 | 12.50 |
| 30 | 11.08 | 5.18 | 4.08 | 10.08 | | 8.66 | 9.67 | 11.14 | 12.65 | 14.10 | 12.73 | 11.90 |
| 31 | 11.53 | | 4.39 | 8.79 | | | | 11.60 | | 13.66 | 13.08 | |
| Mean Day | 13.08 | 8.17 | 6.65 | 8.37 | 8.18 | 9.83 | 9.90 | 11.09 | 12.11 | 12.48 | 12.85 | 12.12 |
| Max Day | 15.04 | 12.20 | 8.94 | 10.48 | 10.44 | 11.73 | 11.80 | 12.08 | 14.15 | 14.10 | 13.74 | 13.62 |
| Min Day | 11.08 | 5.11 | 4.08 | 3.89 | 6.71 | 7.41 | 8.21 | 9.32 | 9.93 | 11.31 | 11.45 | 11.07 |

Table 12. Mean Daily Specific Conductance (um hos/cm @ 25 °C)
San Clemente Creek, Water Year 2016

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 | 365.37 | 345.01 | 304.91 | 256.35 | 192.16 | 227.18 | 208.02 | 233.54 | 267.32 | 299.52 | 329.24 | 337.37 |
| 2 | 361.50 | 321.98 | 309.55 | 267.88 | 195.68 | 234.75 | 211.34 | 235.89 | 268.40 | 299.72 | 329.47 | 332.01 |
| 3 | 354.26 | 333.48 | 312.96 | 276.36 | 195.81 | 236.71 | 214.42 | 238.22 | 272.25 | 300.47 | 329.11 | 333.65 |
| 4 | 355.12 | 326.36 | 313.31 | 282.22 | 199.05 | 206.94 | 213.49 | 240.05 | 275.34 | 302.34 | 328.31 | 332.53 |
| 5 | 352.15 | 322.03 | 307.20 | 222.95 | 199.89 | 155.01 | 216.11 | 239.44 | 274.35 | 302.35 | 329.33 | 330.64 |
| 6 | 352.42 | 320.92 | 312.45 | 134.22 | 202.71 | 144.64 | 222.36 | 239.12 | 272.37 | 299.35 | 326.29 | 332.20 |
| 7 | 352.68 | 320.09 | 319.31 | 162.52 | 207.47 | 166.34 | 226.21 | 239.16 | 274.71 | 301.39 | 324.83 | 337.59 |
| 8 | 358.05 | 315.61 | 319.22 | 181.53 | 211.79 | 181.22 | 225.62 | 244.41 | 273.77 | 305.00 | 325.26 | 339.22 |
| 9 | 358.34 | 311.15 | 320.08 | 198.93 | 214.93 | 189.01 | 226.45 | 245.31 | 271.93 | 307.72 | 328.56 | 339.51 |
| 10 | 357.65 | 314.69 | 322.54 | 209.89 | 216.99 | 169.61 | 223.26 | 244.59 | 268.83 | 303.16 | 328.22 | 340.92 |
| 11 | 357.54 | 311.69 | 301.30 | 219.33 | 220.56 | 169.83 | 223.83 | 246.63 | 267.12 | 301.97 | 330.28 | 338.72 |
| 12 | 357.27 | 311.29 | 315.42 | 222.58 | 222.44 | 162.86 | 221.44 | 248.95 | 273.71 | 303.20 | 333.68 | 337.21 |
| 13 | 361.60 | 311.36 | 297.24 | 228.11 | 223.56 | 158.34 | 219.91 | 246.89 | 272.82 | 304.95 | 339.27 | 330.99 |
| 14 | 366.19 | 313.71 | 307.20 | 224.66 | 224.16 | 168.56 | 218.82 | 246.42 | 267.57 | 312.07 | 341.91 | 329.57 |
| 15 | 369.35 | 298.26 | 311.92 | 234.04 | 228.03 | 177.35 | 221.76 | 251.00 | 263.23 | 311.10 | 338.34 | 331.26 |
| 16 | 367.88 | 310.44 | 305.68 | 236.11 | 229.59 | 185.10 | 221.39 | 252.40 | 263.14 | 311.12 | 334.80 | 331.49 |
| 17 | 365.80 | 312.47 | 307.27 | 242.23 | 228.80 | 189.72 | 226.62 | 253.91 | 270.51 | 308.32 | 334.29 | 335.42 |
| 18 | 360.85 | 317.95 | 308.43 | 203.35 | 199.28 | 193.65 | 228.03 | 258.84 | 275.79 | 309.37 | 335.83 | 338.71 |
| 19 | 355.93 | 320.67 | 312.63 | 171.25 | 207.86 | 198.88 | 231.65 | 255.57 | 278.42 | 308.79 | 336.53 | 344.14 |
| 20 | 353.72 | 325.79 | 314.37 | 165.87 | 212.44 | 199.86 | 228.10 | 247.56 | 281.21 | 309.07 | 337.02 | 347.92 |
| 21 | 348.83 | 326.60 | 324.26 | 183.17 | 213.52 | 198.26 | 228.15 | 242.93 | 285.74 | 310.73 | 337.58 | 342.39 |
| 22 | 346.72 | 326.67 | 241.75 | 186.75 | 213.72 | 197.81 | 225.02 | 241.23 | 286.89 | 312.69 | 338.58 | 337.98 |
| 23 | 347.28 | 325.90 | 242.55 | 172.35 | 215.76 | 201.02 | 225.67 | 243.43 | 286.05 | 318.73 | 338.79 | 330.26 |
| 24 | 348.44 | 323.05 | 263.84 | 179.58 | 218.33 | 204.98 | 226.98 | 247.84 | 288.31 | 315.69 | 337.81 | 335.28 |
| 25 | 350.29 | 316.81 | 243.02 | 183.02 | 222.12 | 205.67 | 223.53 | 248.68 | 291.49 | 315.51 | 335.60 | 342.14 |
| 26 | 342.62 | 307.78 | 246.91 | 187.27 | 224.84 | 209.94 | 222.24 | 251.66 | 295.14 | 319.17 | 338.26 | 345.30 |
| 27 | 345.62 | 302.26 | 245.50 | 191.96 | 225.76 | 205.09 | 225.47 | 250.95 | 303.32 | 326.60 | 341.11 | 346.34 |
| 28 | 352.01 | 299.03 | 255.64 | 194.33 | 225.48 | 202.25 | 227.67 | 257.72 | 308.07 | 328.13 | 339.56 | 345.47 |
| 29 | 346.21 | 297.04 | 253.79 | 205.73 | 228.95 | 202.34 | 229.45 | 258.27 | 304.42 | 329.47 | 339.16 | 342.23 |
| 30 | 339.07 | 299.64 | 253.50 | 207.68 | | 207.17 | 230.50 | 259.07 | 299.44 | 330.95 | 339.48 | 335.31 |
| 31 | 343.70 | | 256.75 | 192.12 | | | | 264.07 | | 330.63 | 341.07 | |
| Mean Day | 354.66 | 316.32 | 291.95 | 207.24 | 214.54 | 191.67 | 223.12 | 247.54 | 279.39 | 310.94 | 334.44 | 337.46 |
| Max Day | 369.35 | 345.01 | 324.26 | 282.22 | 229.59 | 236.71 | 231.65 | 264.07 | 308.07 | 330.95 | 341.91 | 347.92 |
| Min Day | 339.07 | 297.04 | 241.75 | 134.22 | 192.16 | 144.64 | 208.02 | 233.54 | 263.14 | 299.35 | 324.83 | 329.57 |

7 Figures

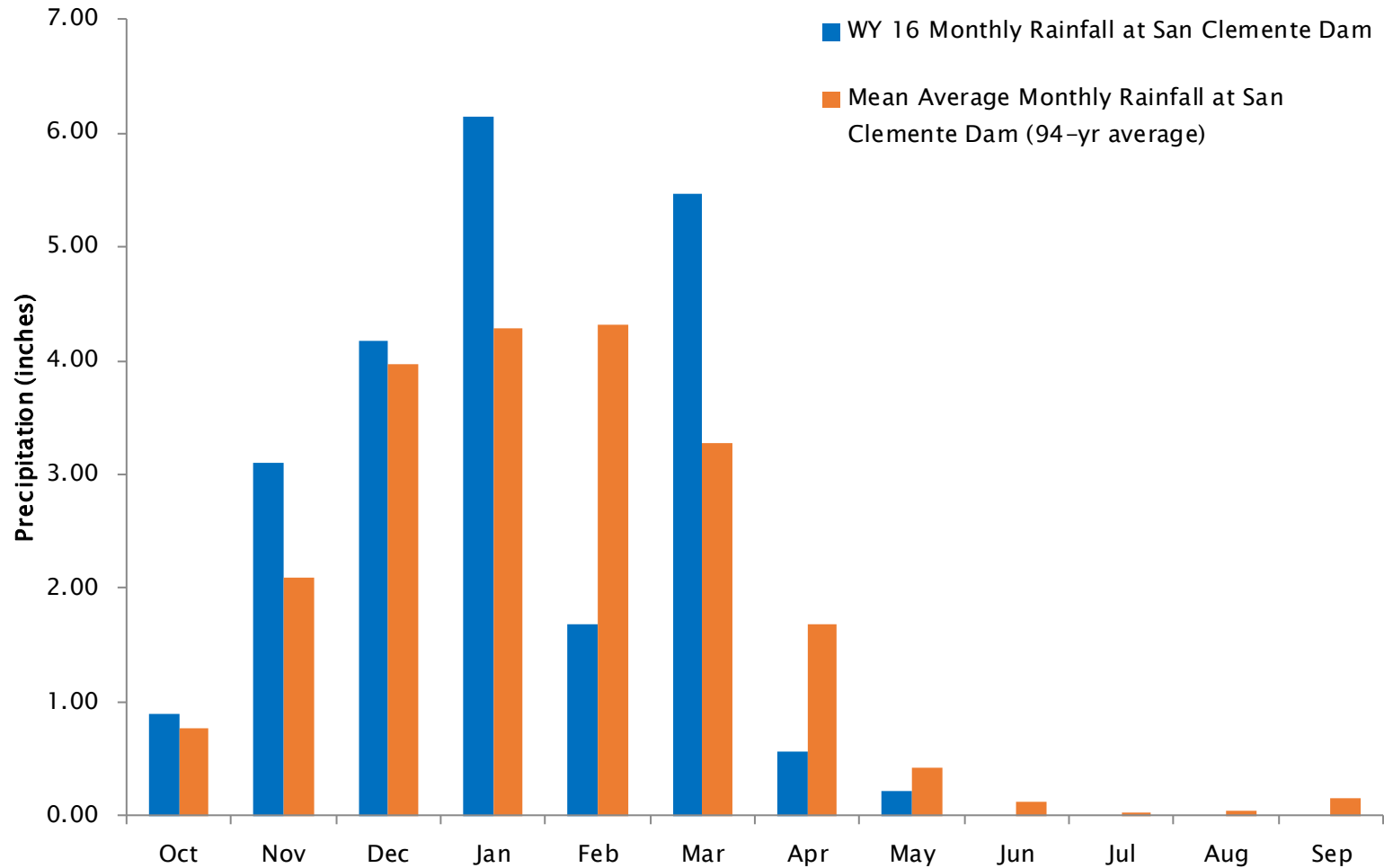


Figure 1. Monthly precipitation at San Clemente Dam for Water Year 2016. WY 2016 precipitation was above average for certain months of the year, but overall slightly above average. Total precipitation in WY 2016 at the dam was 22.25 inches compared to the average total precipitation at the dam, 21.14 inches. Mean monthly data is based on Water Years 1922 - 2015. Precipitation data is provided by the Monterey Peninsula Water Management District (2016).

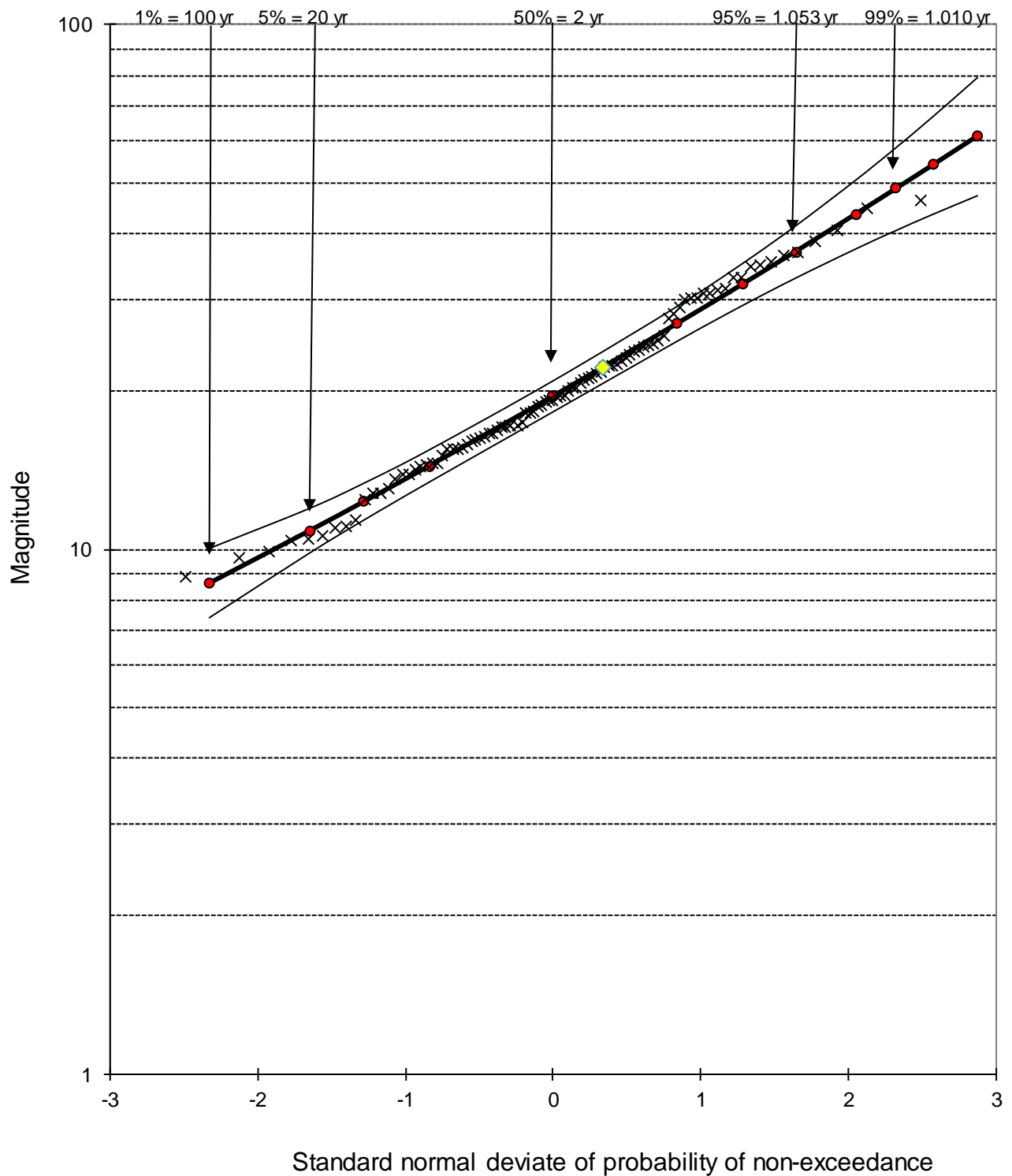


Figure 2. Log-Pearson Type-III statistical analysis of historic precipitation data from San Clemente Dam. Thin curved lines represent upper and lower 95% confidence bounds for precipitation and non-exceedance probability. The yellow diamond symbol marks the 22.25 inch precipitation of the 2016 water year.

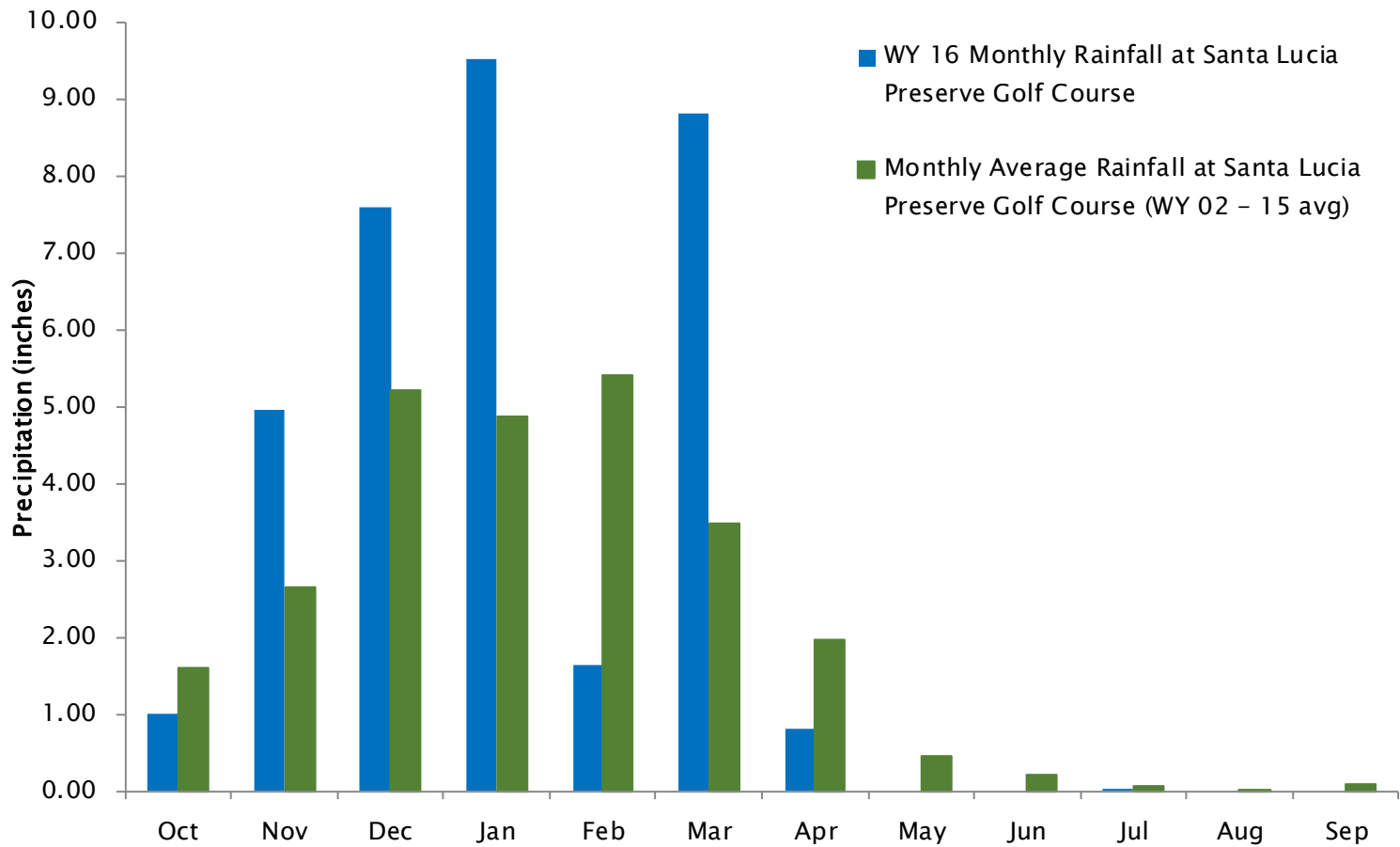


Figure 3. Monthly Precipitation at Santa Lucia Preserve Golf course for Water Year 2016. WY 2016 precipitation was above average at the golf course. Precipitation was 34.39 inches in Water Year 2016 compared to the 15 year annual average of 25.99 inches. Mean monthly average is based only on Water Years 2002 – 2015 and is probably not an accurate characterization of actual long-term patterns due to the past long-term drought (precipitation data from Santa Lucia Preserve, 2015).

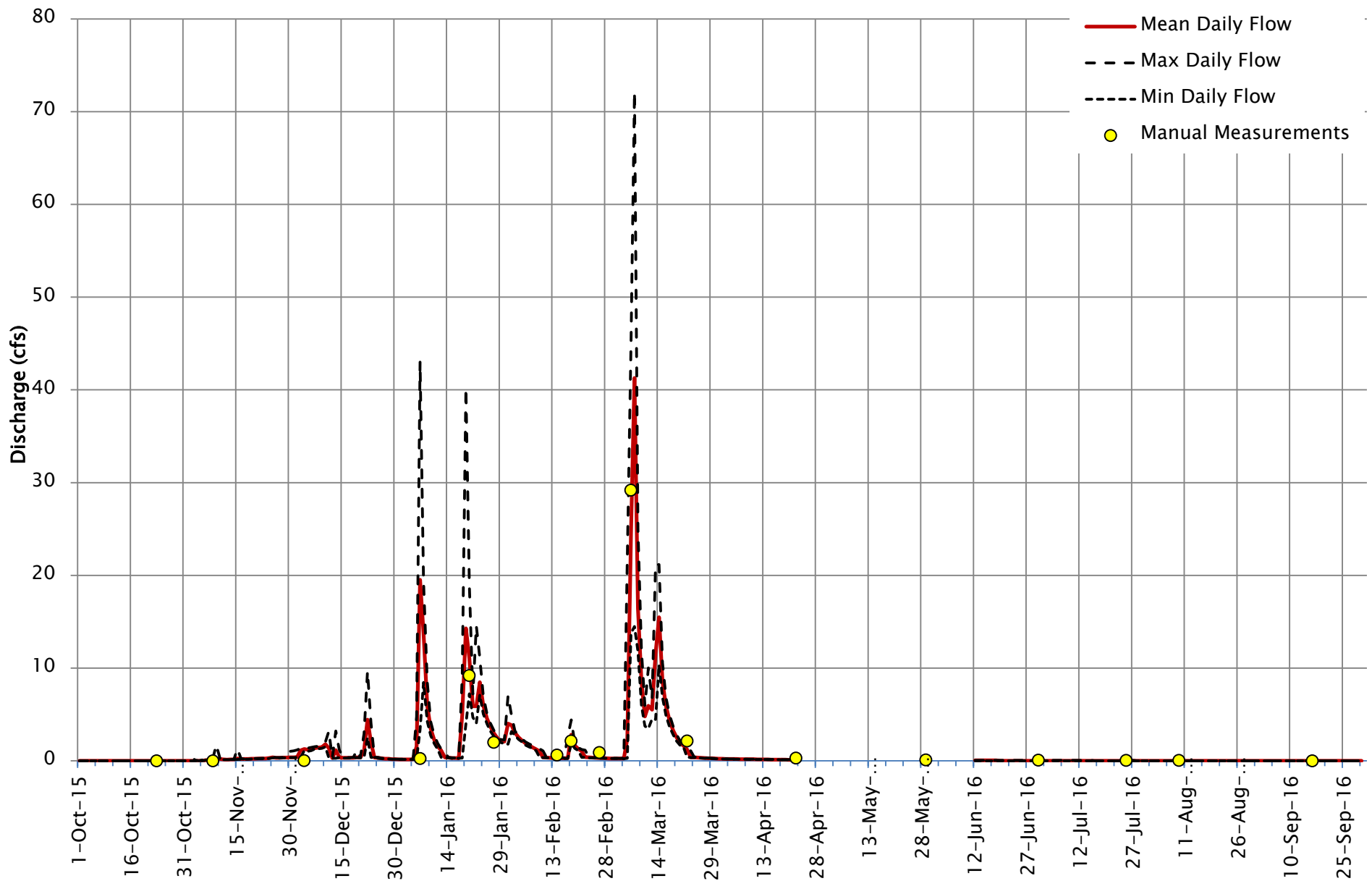


Figure 4. Mean Daily Streamflow at Potrero Creek gage for Water Year 2016. Red line is mean daily streamflow. Minimum and maximum daily flows are also shown. Yellow points represent manual discharge measurements. Orange horizontal line at 29.1 cfs represents the limit to the streamflow rating at Potrero.

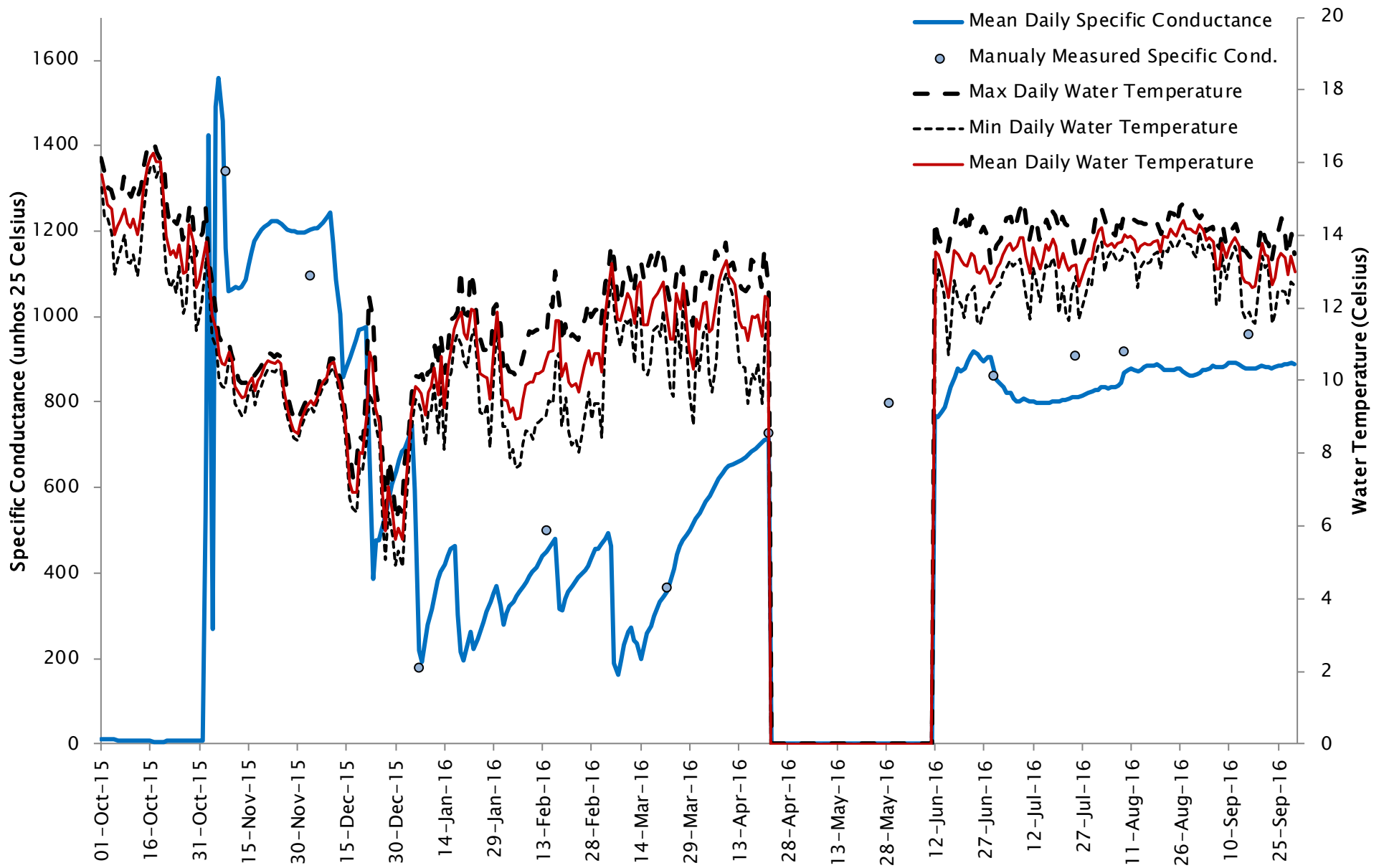


Figure 5. Daily Specific Conductance Water Temperature data at Potrero Creek gage for Water Year 2016.

Blue line is mean daily specific conductance; red line is mean daily water temperature; dotted lines represent minimum and maximum daily water temperature values. From April 23, 2016 through June 11, 2016, the logger malfunctioned causing a data gap.

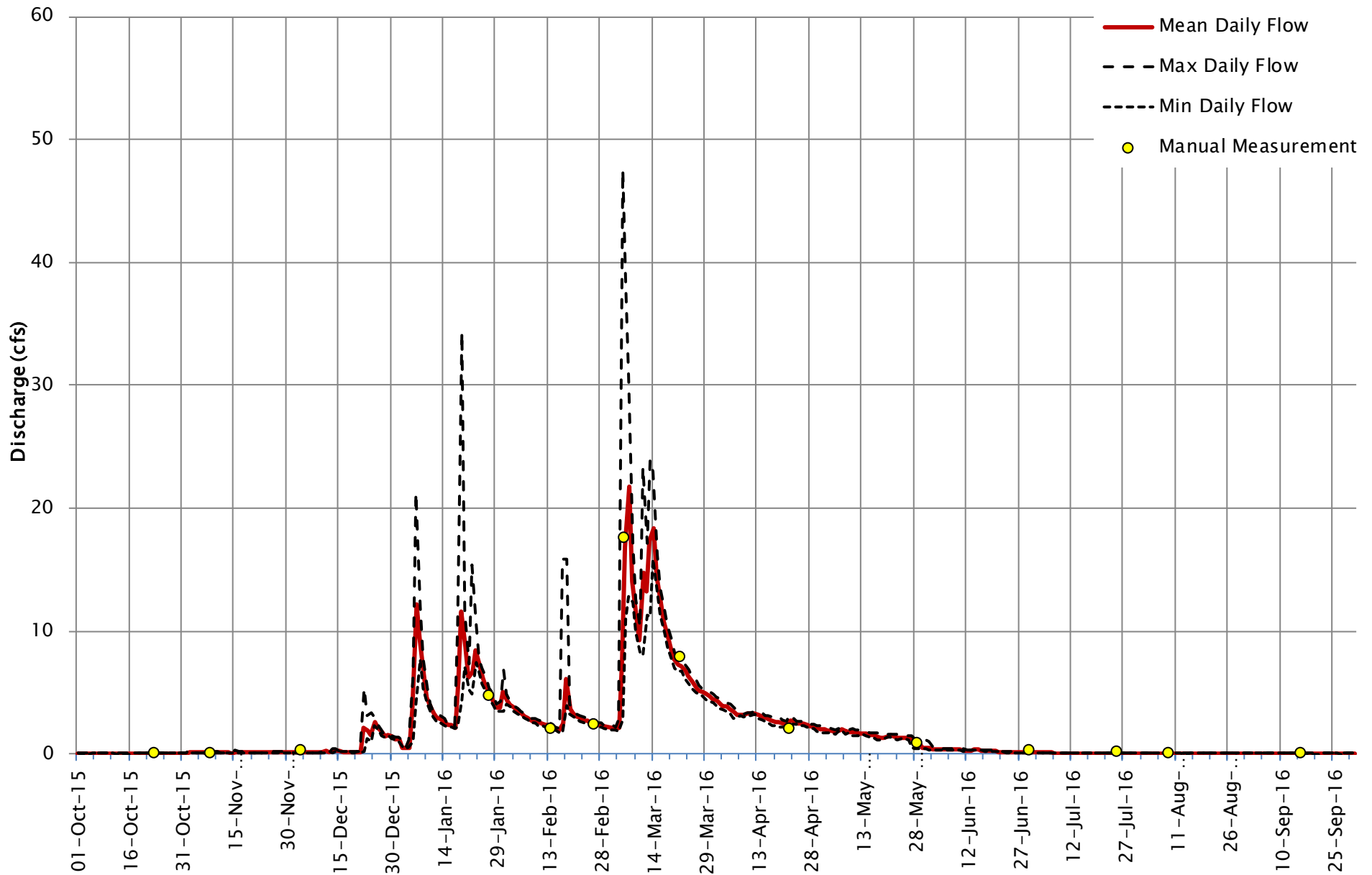


Figure 6. Mean Daily Streamflow at San Clemente Creek gage for Water Year 2016. Red line is mean daily streamflow. Minimum and maximum daily flows are also shown. Yellow points represent manual discharge measurements. The highest average daily flow for Water Year 2016 peaked slightly above the rating limit (21.5 cfs) at 21.8 cfs.

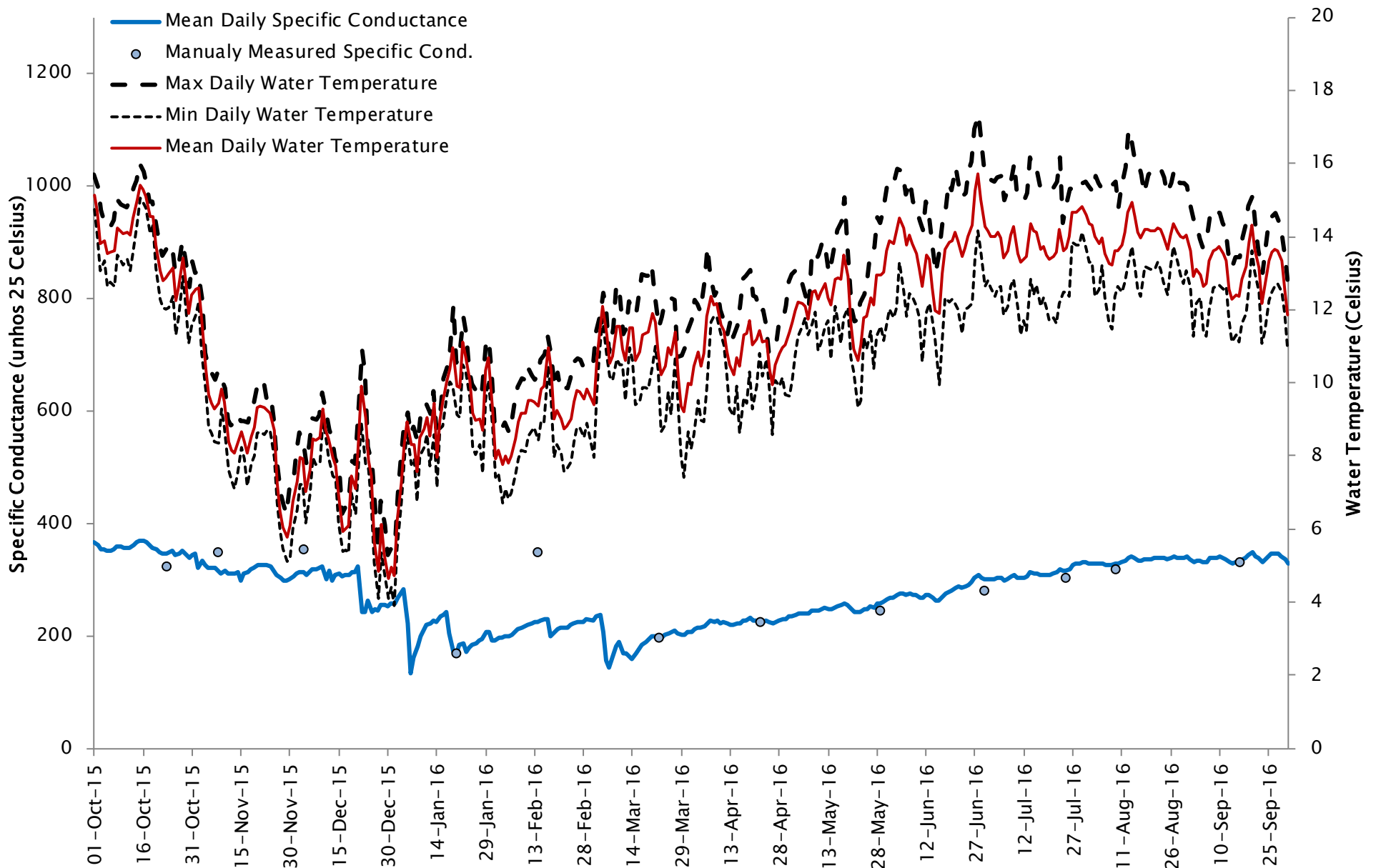


Figure 7. Daily Specific Conductance and Water Temperature data at San Clemente Creek gage for Water Year 2016. Blue line is mean daily specific conductance; red line is mean daily water temperature; dotted lines represent minimum and maximum daily water temperature values.